

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Sin J. Lee Examiner #: 76060 Date: 1-11-2006
 Art Unit: 1752 Phone Number 30 2-1333 Serial Number: 101671,732
 Mail Box and Bldg/Room Location: 9D68 Results Format Preferred (circle): PAPER DISK E-MAIL
(Rem.)

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Bib attached

SCIENTIFIC REFERENCE BR
Sci. & Tech. Info. Cntr

JAN 17

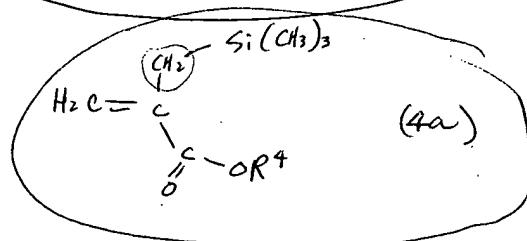
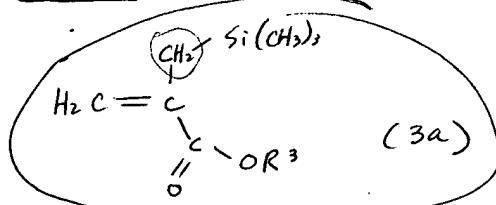
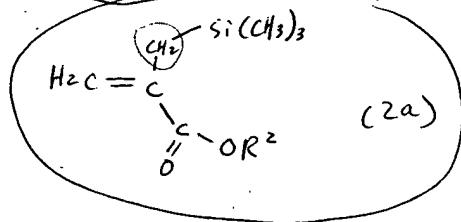
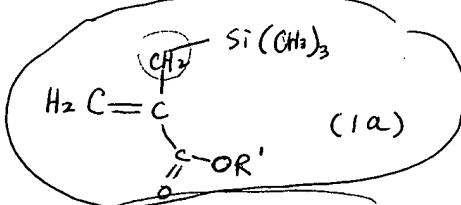
Earliest Priority Filing Date:

Pat. & T.M. Office

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Plz. Search for any one of the monomers of formula (1a)-(4a)

or a polymer made from any one of those formulas



(See cl. #6 for
definitions of R¹ - R⁴)

STAFF USE ONLY		Type of Search	Vendors and cost where applicable
Searcher: <u>MQH</u>		NA Sequence (#)	STN
Searcher Phone #:		AA Sequence (#)	Dialog
Searcher Location:		Structure (#)	Questel/Orbit
Date Searcher Picked Up:		Bibliographic	Dr. Link
Date Completed: <u>1/12/06</u>		Litigation	Lexis/Nexis
Searcher Prep & Review Time:		Fulltext	Sequence Systems
Clerical Prep Time:		Patent Family	WWW/Internet
Online Time:		Other	Other (specify)

=> fil reg
FILE 'REGISTRY' ENTERED AT 16:24:53 ON 12 JAN 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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=> d his

(FILE 'HOME' ENTERED AT 10:41:02 ON 12 JAN 2006)

FILE 'HCAPLUS' ENTERED AT 10:41:14 ON 12 JAN 2006
E US20040067436/PN

L1 1 S E3
SEL RN

FILE 'REGISTRY' ENTERED AT 10:41:54 ON 12 JAN 2006
L2 21 S E1-21

FILE 'HCAPLUS' ENTERED AT 10:42:17 ON 12 JAN 2006
L3 1 S L1 AND L2

FILE 'LREGISTRY' ENTERED AT 11:06:19 ON 12 JAN 2006
L4 STR

FILE 'REGISTRY' ENTERED AT 11:10:40 ON 12 JAN 2006
L5 STR L4
L6 STR L5
L7 6 S L6
L8 138 S L6 FUL
L9 13 S L2 AND L8
SAV L8 LEE732/A

FILE 'HCAPLUS' ENTERED AT 12:06:47 ON 12 JAN 2006
L10 104 S L8
L11 23 S L9
L12 4992 S ACID? (2A) (LABIL? OR LABL?)
L13 0 S L10 AND L12

FILE 'REGISTRY' ENTERED AT 13:22:19 ON 12 JAN 2006
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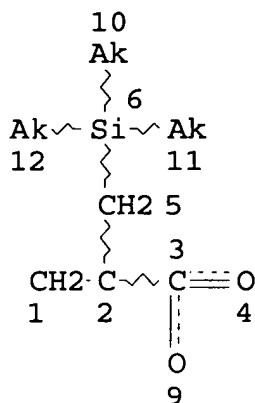
L35 2 S L22 AND PMS/CI

FILE 'HCAPLUS' ENTERED AT 15:41:00 ON 12 JAN 2006

L36 3 S L35
L37 38173 S 74-5/SC,SX
L38 1 S L37 AND L31
L39 33 S L11 OR L32 OR L33 OR L34
L40 35 S L39 OR L36
L41 26736 S (RESIST OR RESISTS OR PHOTORESIST?)/TI
L42 1 S L41 AND L31
L43 478833 S 74/SC,SX
L44 2 S L43 AND L31
L45 QUE (35 OR 36 OR 37 OR 38)/SC,SX
L46 8 S L45 AND L31
L47 10 S L36 OR L38 OR L42 OR L44 OR L46
L48 75 S L31 NOT L47
L49 96165 S (RESIST OR RESISTS OR PHOTORESIST?)
L50 1 S L31 AND L49
L51 19 S L11 NOT (L32 OR L33 OR L34)

FILE 'REGISTRY' ENTERED AT 16:24:53 ON 12 JAN 2006

=> d l22 que stat
L6 STR



NODE ATTRIBUTES:

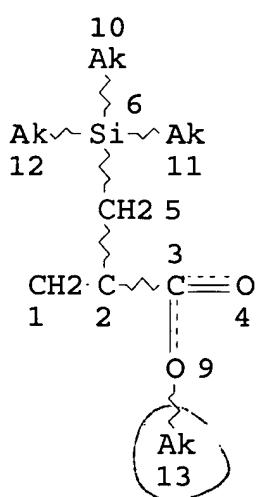
CONNECT IS E1 RC AT 10
 CONNECT IS E1 RC AT 11
 CONNECT IS E1 RC AT 12
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE

L8 138 SEA FILE=REGISTRY SSS FUL L6
 L18 STR



R1

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 10
 CONNECT IS E1 RC AT 11
 CONNECT IS E1 RC AT 12
 CONNECT IS E1 RC AT 13
 DEFAULT MLEVEL IS ATOM
 GGCAT IS SAT AT 13
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE

L22 64 SEA FILE=REGISTRY SUB=L8 SSS FUL L18

100.0% PROCESSED 138 ITERATIONS
 SEARCH TIME: 00.00.01

64 ANSWERS

=> fil hcap
 FILE 'HCAPLUS' ENTERED AT 16:25:58 ON 12 JAN 2006
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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=> d 147 cbib abs hitstr hitind 1-10 >

L47 ANSWER 1 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN
 2004:293281 Document No. 140:329540 Polymerizable silicon-containing
 compound for polymer **resist** composition and patterning
 process. Kinsho, Takeshi; Watanabe, Takeru; Hasegawa, Koji (Japan).
 U.S. Pat. Appl. Publ. US 2004067436 A1 20040408, 22 pp.
 (English). CODEN: USXXCO. APPLICATION: US 2003-671732 20030929.

PRIORITY: JP 2002-285171 20020930.
 AB Polymerizable silicon-contg. compds. of formula:
 $(CH_3)_3SiCH_2C(=CH_2)C(=O)OR_1$ (R1 = hydrogen, halogen or monovalent
 org. group) are polymd. into polymers. A resist compn. comprising
 the polymer as a base resin is sensitive to high-energy radiation,
 has excellent sensitivity and resoln. at a wavelength of less than
 300 nm, and high resistance to oxygen plasma etching, and thus lends
 itself to micropatterning for the fabrication of VLSIs.

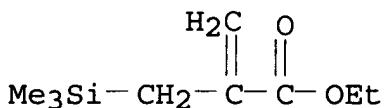
IT 74976-84-4P 75366-36-8P 100548-24-1P

Applicant

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation);
 PREP (Preparation); RACT (Reactant or reagent)
 (polymerizable silicon-contg. compd. for polymer resist compn.
 and patterning process)

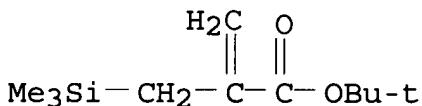
RN 74976-84-4 HCPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
 (CA INDEX NAME)



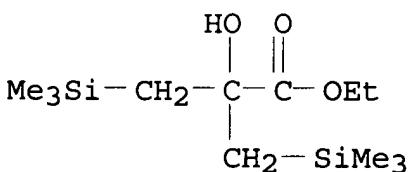
RN 75366-36-8 HCPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, 1,1-dimethylethyl
 ester (9CI) (CA INDEX NAME)



RN 100548-24-1 HCPLUS

CN Propanoic acid, 2-hydroxy-3-(trimethylsilyl)-2-
 [(trimethylsilyl)methyl]-, ethyl ester (9CI) (CA INDEX NAME)



IT 677776-00-0P

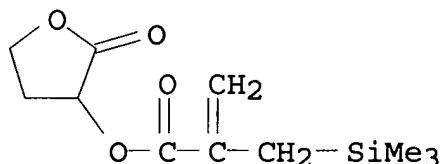
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or
 engineered material use); PREP (Preparation); USES (Uses)
 (polymerizable silicon-contg. compd. for polymer resist compn.
 and patterning process)

RN 677776-00-0 HCPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, 1,1-dimethylethyl
 ester, polymer with tetrahydro-2-oxo-3-furanyl 2-
 [(trimethylsilyl)methyl]-2-propenoate (9CI) (CA INDEX NAME)

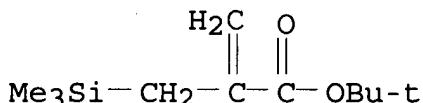
CM 1

CRN 677775-93-8
 CMF C11 H18 O4 Si



CM 2

CRN 75366-36-8
 CMF C11 H22 O2 Si



IC ICM G03C001-73
 ICS G03F007-039; G03F007-20; G03F007-30; G03F007-38; G03F007-36
 INCL 430270100; 430905000; 430907000; 430910000; 430326000; 430914000;
 430327000; 430328000; 430331000; 430313000
 CC 74-5 (Radiation Chemistry, Photochemistry, and
 Photographic and Other Reprographic Processes)
 IT 74976-84-4P 75366-35-7P 75366-36-8P
 100548-24-1P 677775-91-6P 677775-92-7P 677775-93-8P
 677775-94-9P 677775-96-1P
 RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation);
 PREP (Preparation); RACT (Reactant or reagent)
 (polymerizable silicon-contg. compd. for polymer resist compn.
 and patterning process)
 IT 677775-97-2P 677775-98-3P 677775-99-4P 677776-00-0P
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or
 engineered material use); PREP (Preparation); USES (Uses)
 (polymerizable silicon-contg. compd. for polymer resist compn.
 and patterning process)

L47 ANSWER 2 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN

2000:314737 Document No. 132:335047 Solid catalyst component having heteroatom-containing malonate for α -olefin polymerization.

Morini, Giampiero; Balbontin, Giulio; Gulevich, Yuri V. (Montell Technology Company BV, Neth.). PCT Int. Appl. WO 2000026259 A1 20000511, 20 pp. DESIGNATED STATES: W: AU, BR, CA, CN, HU, IL, IN, JP, KR, MX, RU, SG, US, ZA; RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1999-EP8018 19991022. PRIORITY: EP 1998-203733 19981104.

AB A solid catalyst component for stereospecific polymn. of α -olefins comprises Ti, Mg, halogen, and an electron donor compd. selected from heteroatom-contg. esters of malonic acids. A catalyst system for olefin polymn. includes the above catalyst component, an alkylaluminum compd., and an external electron donor, such as a silane compd. Isotactic polypropylene was manufd. with high yield and high isotactic index (expressed in terms of high xylene insol.). by using the catalyst system.

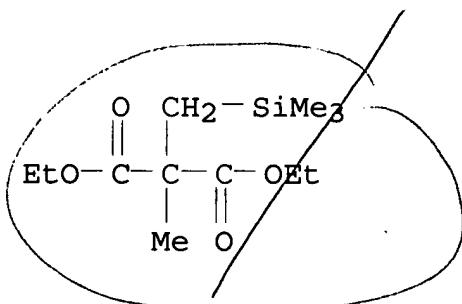
IT 18141-66-7

RL: CAT (Catalyst use); USES (Uses)

(solid catalyst component having heteroatom-contg. malonate for α -olefin polymn.)

RN 18141-66-7 HCAPLUS

CN Propanedioic acid, methyl[(trimethylsilyl)methyl]-, diethyl ester (9CI) (CA INDEX NAME)



IC ICM C08F004-651

ICS C08F004-654; C08F010-00; C07C069-38

CC 35-3 (Chemistry of Synthetic High Polymers)

IT 1558-95-8 7550-45-0, Titanium tetrachloride, uses 7705-07-9, Titanium trichloride, uses 7786-30-3, Magnesium chloride, uses 17962-38-8, Diethyl 2-(trimethylsilylmethyl)malonate

18141-66-7 21980-12-1 37556-13-1 40479-09-2

41649-48-3 101172-66-1 111654-32-1 130624-23-6 130624-25-8

267431-36-7 267431-37-8 267431-38-9 267431-39-0 267431-40-3

267431-41-4 267431-42-5 267431-43-6

RL: CAT (Catalyst use); USES (Uses)

(solid catalyst component having heteroatom-contg. malonate for α-olefin polymn.)

L47 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN
 1999:487121 Document No. 131:144983 Free-radical chain transfer polymerization process. Rizzardo, Ezio; Meijis, Gordon Francis; Thang, San Hoa (Commonwealth Scientific and Industrial Research Organisation, Australia). U.S. US 5932675 A 19990803, 23 pp. (English). CODEN: USXXAM. APPLICATION: US 1997-823299 19970321. PRIORITY: US 1989-372357 19890605; US 1991-731393 19910717; US 1993-72687 19930607; US 1994-325496 19941019; US 1995-478515 19950607.

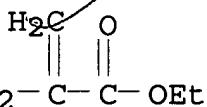
AB A process for the prodn. of lower mol. wt. polymers by free-radical polymn. uses $\text{CH}_2=\text{C}[\text{CH}_2\text{X}(\text{R}_2)\text{n}]\text{R}_1$ as alternatives to thiols or other chain transfer agents for the control of mol. wt., where R_1 is a group capable of activating vinylic carbon toward free radical addn., exclusive of hydrogen, R_2 is alkyl, alkenyl, alkynyl, or a satd, unsatd. or arom. carbocyclic or heterocyclic ring, optionally contg. hydroxy, amino, halogen, phosphonate, trialkylsilyl, cyano, epoxy, carboxylic acid, carboxylic acid ester, allyl or alkyl substituents, X is S, Si, Se, P, Br, Cl, Sn, phosphonate, sulfoxide sulfone or phosphine oxide, and n is 0-3, such that the valency of X is satisfied and, when $n > 1$, R_2 is identical or different. Thus, Me methacrylate contg. azobisisobutyronitrile and α-(tert-butanethiomethyl)styrene (I) was polymd. for 1 h at 60° in the absence of oxygen. The chain transfer const. calcd. for I was 1.24, indicating that I was an efficient chain transfer agent and produced poly(Me methacrylate) of low mol. wt. in a controlled manner.

IT 74976-84-4P

RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (chain-transfer agent; for mol. wt. control in free-radical polymn. of vinyl compds.)

RN 74976-84-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
 (CA INDEX NAME)



IC ICM C08F002-38

INCL 526289000

CC 35-4 (Chemistry of Synthetic High Polymers)

IT 25150-08-7P 25186-51-0P 51876-00-7P 51876-03-0P 60154-85-0P,
 α - (2-Hydroxyethylthiomethyl)styrene 74976-84-4P
 89295-32-9P, Ethyl α - (benzenesulfonylmethyl)acrylate
 92822-43-0P 108286-71-1P 116233-34-2P, α - (tert-
 Butylthiomethyl)styrene 116233-35-3P 118729-71-8P 118729-73-0P
 118769-89-4P 118769-92-9P 118769-96-3P 118769-99-6P
 118770-08-4P 118770-23-3P 118770-39-1P, α -
 Benzyloxyacrylonitrile 118770-44-8P, Methyl α -
 benzyloxyacrylate 118770-49-3P, α -Benzyloxyacrylamide
 118770-56-2P, α - (4-Methoxycarbonylbenzyloxy)styrene
 118770-59-5P 118770-64-2P, α - (4-Cyanobenzyloxy)styrene
 118770-67-5P 118770-70-0P 118770-72-2P, α -Benzyloxy[4-
 chloromethyl)styrene] 118770-74-4P 118770-76-6P 118770-80-2P
 118770-83-5P 118770-85-7P 118770-87-9P 118770-90-4P
 118770-92-6P 118770-95-9P 118770-97-1P 118770-99-3P
 118992-87-3P

RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(chain-transfer agent; for mol. wt. control in free-radical polymn. of vinyl compds.)

L47 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN

1998:38909 Document No. 128:61908 Vinyl compounds in radical polymerization for polymer molecular weight control and end-group functionality. Meijis, Gordon Francis; Rizzardo, Ezio; Thang, San Hoa (Commonwealth Scientific and Industrial Research Organisation, Australia). Pat. Specif. (Aust.) AU 682408 B2 19971002, 57 pp. (English). CODEN: ALXXAP. APPLICATION: AU 1994-79029 19941125.

AB Compds. $\text{CH}_2:\text{CRCH}_2\text{X}(\text{R}')^n$, where R is H or a group capable of activating the vinyl carbon towards free radical addn. and selected from optionally substituted Ph or other arom. groups, or alkoxy carbonyl or aryloxycarbonyl, carboxy, acyloxy, carbamoyl, cyano groups or halogen; R' is an optionally substituted alkyl, alkenyl, alkynyl, or satd., unsatd. or arom. carbocyclic or heterocyclic ring; X is a S, Se, P, Br, Sn, and/or O-contg. group selected from phosphonate, sulfoxide, sulfone and phosphine oxide; and n = 0-3, such that the valency of the group X is satisfied and, when n is greater than 1, R' are identical or different are used to control the mol. wt. and end-group functionality of polymers prep'd. by radical polymn. of unsatd. compds. Thus, 4 mL of a mixt. of 45 mL Me methacrylate and 49.5 mg AIBN contg. 17.4 mg α - (tert-butylthiomethyl)styrene (I) was polymd. 1 h at 60° in the absence of oxygen, giving 10.1% conversion and Mn

IT 27,870, compared with 10.9 and 205,190, resp., without I.
118770-20-0P, Ethyl α -(trimethylsilylmethyl)acrylate-methyl methacrylate telomer
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (prepn. of; vinyl compds. in radical polymn. for polymer mol. wt. control and end-group functionality)

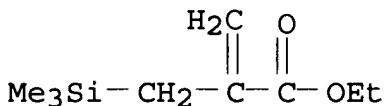
RN 118770-20-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, telomer with ethyl 2-[(trimethylsilyl)methyl]-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 74976-84-4

CMF C9 H18 O2 Si



CM 2

CRN 9011-14-7

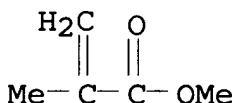
CMF (C5 H8 O2)x

CCI PMS

CM 3

CRN 80-62-6

CMF C5 H8 O2



IC ICM C07C321-20

ICS C07C323-52; C07C323-12; C07C323-25; C07C317-10; C07C317-44; C07C323-60; C07C323-54; C07F007-18; C07F009-11; C07F007-08; C07F007-22

CC 35-2 (Chemistry of Synthetic High Polymers)
 Section cross-reference(s): 24

IT 118769-83-8P, α - (tert-Butylthiomethyl) styrene-methyl methacrylate telomer 118769-84-9P, α - (tert-Butylthiomethyl) styrene-styrene telomer 118769-85-0P, α - (tert-Butylthiomethyl) styrene-methyl acrylate telomer 118769-86-1P, α - (tert-Butylthiomethyl) styrene-vinyl acetate telomer 118769-87-2P, α - (n-Butylthiomethyl) styrene-methyl methacrylate telomer 118769-88-3P, α - (n-Butylthiomethyl) styrene-styrene telomer 118769-90-7P, α - (Carboxymethylthiomethyl) styrene-methyl methacrylate telomer 118769-91-8P, α - (Carboxymethylthiomethyl) styrene-styrene telomer 118769-93-0P, α - (Carboxyethylthiomethyl) styrene-styrene telomer 118769-94-1P, α - (Hydroxyethylthiomethyl) styrene-methyl methacrylate telomer 118769-95-2P, α - (Hydroxyethylthiomethyl) styrene-styrene telomer 118769-97-4P, α - (2-Aminoethylthiomethyl) styrene-methyl methacrylate telomer 118769-98-5P, α - (2-Aminoethylthiomethyl) styrene-styrene telomer 118770-00-6P, Styrene- α - [3- (trimethoxysilyl) propylthiomethyl] styrene telomer 118770-01-7P, α - (Bromomethyl) styrene-methyl methacrylate telomer 118770-02-8P, α - (Bromomethyl) styrene-styrene telomer 118770-03-9P, α - (Bromomethyl) styrene-methyl acrylate telomer 118770-04-0P, Ethyl α - (tert-butylthiomethyl) acrylate-methyl methacrylate telomer 118770-05-1P, Ethyl α - (tert-butylthiomethyl) acrylate-styrene telomer 118770-06-2P, Ethyl α - (tert-butylthiomethyl) acrylate-methyl acrylate telomer 118770-07-3P, Ethyl α - (tert-butylthiomethyl) acrylate-vinyl acetate telomer 118770-09-5P, Ethyl α - (carboxymethylthiomethyl) acrylate-methyl methacrylate telomer 118770-10-8P, Ethyl α - (carboxymethylthiomethyl) acrylate-styrene telomer 118770-12-0P, α - (Carboxymethylthiomethyl) acrylic acid-methyl methacrylate telomer 118770-13-1P, α - (Carboxymethylthiomethyl) acrylic acid-styrene telomer 118770-14-2P, α - (tert-Butylthiomethyl) acrylonitrile-methyl methacrylate telomer 118770-15-3P, α - (tert-Butylthiomethyl) acrylonitrile-styrene telomer 118770-16-4P, α - (tert-Butylthiomethyl) acrylonitrile-methyl acrylate telomer 118770-17-5P, α - (tert-Butylthiomethyl) acrylonitrile-vinyl acetate telomer 118770-18-6P, Ethyl α - (bromomethyl) acrylate-methyl acrylate copolymer 118770-19-7P, α - (Diethoxyphosphorylmethyl) styrene-methyl methacrylate telomer 118770-20-0P, Ethyl α - (trimethylsilylmethyl) acrylate-methyl methacrylate telomer 118770-21-1P, Ethyl α - (benzenesulfonylmethyl) acrylate-methyl methacrylate telomer 118770-22-2P, Ethyl α - (benzenesulfonylmethyl) acrylate-styrene telomer 118770-24-4P 118770-26-6P, α -

(Benzenesulfonylmethyl)vinyl acetate-methyl methacrylate telomer
 118770-27-7P, α -(Benzenesulfonylmethyl)vinyl acetate-styrene
 telomer 118770-28-8P, α -(Benzenesulfonylmethyl)vinyl
 acetate-methyl acrylate telomer 118770-29-9P, α -
 (Benzenesulfonylmethyl)vinyl acetate-vinyl acetate telomer
 118770-30-2P, α -(Bromomethyl)acrylonitrile-methyl methacrylate
 telomer 118770-31-3P, α -(Bromomethyl)acrylonitrile-methyl
 acrylate telomer 118770-32-4P, α -(Chloromethyl)acrylonitrile-
 methyl acrylate telomer 118770-33-5P, Acrylonitrile- α -(tert-
 butylthiomethyl)acrylonitrile telomer 118770-34-6P,
 Acrylonitrile- α -(tert-butylthiomethyl)styrene telomer
 118804-58-3P, Ethyl α -(bromomethyl)acrylate-methyl
 methacrylate copolymer 118804-59-4P, Ethyl α -(tri-n-
 butylstannylmethyl)acrylate-methyl methacrylate telomer
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (prepn. of; vinyl compds. in radical polymn. for polymer mol. wt.
 control and end-group functionality)

L47 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN

1996:546638 Document No. 125:248901 Hydrosilylating unsaturated monomers. Lewis, Larry N.; Carothers, Terrell W. (General Electric Company, USA). U.S. US 5550272 A 19960827, 6 pp. (English). CODEN: USXXAM. APPLICATION: US 1995-538149 19951002.

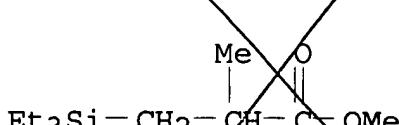
AB Polymn./crosslinking is prevented by using a free-radical polymn. inhibitor in the hydrosilylation of unsatd. monomers in the presence of a transition metal catalyst. Thus, heating a mixt. contg. SiH-stopped silicone fluid, acrylonitrile, 4-hydroxyTEMPO, and a Pt catalyst soln. 2 h at 111° gave a viscose silicone oil with 100% of the SiH groups converted to CHMeCN groups.

IT 18002-64-7P

RL: IMF (Industrial manufacture); PREP (Preparation)
 (hydrosilylating unsatd. monomers in presence of polymn.
 inhibitors)

RN 18002-64-7 HCAPLUS

CN Propanoic acid, 2-methyl-3-(triethylsilyl)-, methyl ester (9CI) (CA INDEX NAME)



IC ICM C07F007-08
 ICS C07F007-10

INCL 556479000

CC 35-10 (Chemistry of Synthetic High Polymers)

IT 107-13-1DP, Acrylonitrile, reaction products with hydrogen siloxanes
18002-64-7P 24636-31-5P, Methacryloxypropyldimethylsilyl
 chloride 182070-65-1P 182070-71-9P
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (hydrosilylating unsatd. monomers in presence of polymn.
 inhibitors)

L47 ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN

1995:591826 Document No. 123:183184 Platinum(II) Bis(β -diketonates) as Photoactivated Hydrosilation Catalysts. Lewis, Frederick D.; Salvi, Gwen D. (Department of Chemistry, Northwestern University, Evanston, IL, 60208-3113, USA). Inorganic Chemistry, 34(12), 3182-9 (English) 1995. CODEN: INOCAJ. ISSN: 0020-1669. Publisher: American Chemical Society.

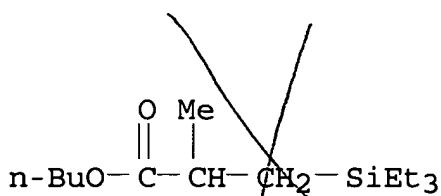
AB Irradn. of hydrosilanes and olefin in the presence of platinum(II) bis(β -diketonates) results in olefin hydrosilation. The initial rate of hydrosilation is dependent upon the choice of β -diketonate ligand, hydrosilane, and olefin. Formation of an active catalyst requires the presence of either triethylsilane or triethylvinylsilane during a brief period of irradn. Addn. of the second reactant results in hydrosilation without further irradn. Substantial inhibition of hydrosilation is obsd. when dibenzo[a,e]cyclooctatetraene is added following irradn. and prior to addn. of the second reactant, but not when mercury is added following irradn. These results indicate that the active form of the photogenerated catalyst is homogeneous rather than heterogeneous. Correlation of hydrosilation reactivity with the spectroscopic changes which occur during irradn. suggests that the primary photoproduct is not catalytically active and that a secondary photochem. reaction results in the loss of one of the two β -diketonate ligands and the formation of the active catalyst.

IT 167423-64-5P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (platinum(II) bis(β -diketonates) as photoactivated olefin
 hydrosilation catalysts)

RN 167423-64-5 HCAPLUS

CN Propanoic acid, 2-methyl-3-(triethylsilyl)-, butyl ester (9CI) (CA INDEX NAME)



CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 22

IT 2295-15-0P, 1,2-Bis(trimethylsilyl)ethane 13810-04-3P 14355-62-5P
18279-65-7P 61210-56-8P 90722-97-7P 167423-62-3P
167423-63-4P 167423-64-5P

RL: SPN (Synthetic preparation); PREP (Preparation)
(platinum(II) bis(β -diketonates) as photoactivated olefin hydrosilation catalysts)

L47 ANSWER 7 OF 10 HCPLUS COPYRIGHT 2006 ACS on STN
1991:82601 Document No. 114:82601 Chain transfer activity of some activated allylic compounds. Meijs, Gordon F.; Rizzato, Ezio; Thang, San H. (Div. Chem. Polym., CSIRO, Clayton, 3168, Australia). Polymer Bulletin (Berlin, Germany), 24(5), 501-5 (English) 1990.
CODEN: POBUDR. ISSN: 0170-0839.

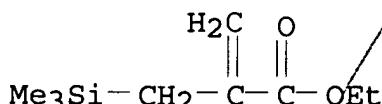
AB Various olefins that were activated towards radical addn. and contained a homolytic leaving group in the allylic position were effective chain-transfer agents in radical polymers. of Me (meth)acrylate, styrene, and vinyl acetate. These allylic compds. included bromides, phosphonates, stannanes, thioethers, sulfoxides, and sulfones. Allylic silanes and chlorides, however, did not possess significant chain-transfer activity. Suitable activating substituents towards radical addn. were Ph, EtOCO, CN, and AcO. Several of the compds. had an advantage over thiols in that they did not contain S.

IT 74976-84-4

RL: USES (Uses)
(chain-transfer agents, for Me methacrylate polymn.)

RN 74976-84-4 HCPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
(CA INDEX NAME)



CC 35-3 (Chemistry of Synthetic High Polymers)
 IT 106-95-6, 3-Bromo-1-propene, uses and miscellaneous
74976-84-4 108286-71-1
 RL: USES (Uses)
 (chain-transfer agents, for Me methacrylate polymn.)

L47 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN
 1989:76295 Document No. 110:76295 Control of molecular weight and end group functionality of polymers. Rizzato, Ezio; Meijis, Gordon Francis; Thang, San Hoa (Commonwealth Scientific and Industrial Research Organization, Australia). PCT Int. Appl. WO 8804304 A1 19880616, 95 pp. DESIGNATED STATES: W: AU, JP, US; RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE. (English). CODEN: PIXXD2.
 APPLICATION: WO 1987-AU412 19871204. PRIORITY: AU 1986-9351 19861205; AU 1987-3813 19870819.

AB $\text{CH}_2:\text{CR}_1\text{Y}$ [R₁ = H or a group capable of activating the vinyl group towards free radical addn.; Y = $\text{CH}_2\text{XR}_2\text{n}$ or OR₂; R₂ = (substituted) alkyl, (substituted) alkenyl, (substituted) alkynyl, or carbo- or heterocyclic ring, X = element other than C from Group IV, V, VI, or VII or Group IV, V, or VI to which is attached ≥ 1 O, n = 0-3] are useful in controlling mol. wt. and end-group functionality in free-radical polymn. Thus, 4 mL of a soln. prep'd. from 25 mL Me methacrylate and 49.5 mg AIBN was polymd. 1 h at 60° in the presence of 9.0, 17.4, 31.4, and 61.6 mg α -(tert-butylthiomethyl)styrene [I, prep'd. by reaction of α -(bromomethyl)styrene with Me₃CSH] to give polymer samples with no.-av. mol. wts. 46,071, 27,870, 16,795, and 9600, resp., at conversions 10.4, 10.1, 9.4, and 8.6, resp., compared with 205,190 and 10.9%, resp., in the absence of I.

IT 118770-20-0P
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (manuf. of oligomeric)

RN 118770-20-0 HCAPLUS

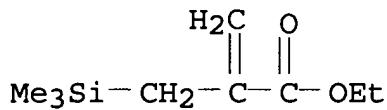
CN 2-Propenoic acid, 2-methyl-, methyl ester, telomer with ethyl 2-[(trimethylsilyl)methyl]-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 74976-84-4

CMF C9 H18 O2 Si

↳ being used
 as chain - transfer
 agent
 (not part of final polymer)

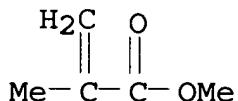


CM 2

CRN 9011-14-7
 CMF (C5 H8 O2)x
 CCI PMS

CM 3

CRN 80-62-6
 CMF C5 H8 O2



IC ICM C08F002-38

ICS C07C149-267; C07C149-273; C07C147-14; C07C149-20; C07C121-30;
 C07C069-92; C07C149-415; C07C043-176; C07C121-75; C07C043-178;
 C07C093-00; C07C043-215; C07C069-157; C07C069-16; C07C121-38;
 C07C069-708; C07C103-175; C07F007-18; C07F009-40

CC 35-4 (Chemistry of Synthetic High Polymers)

IT	118729-72-9P	118729-74-1P	118729-75-2P	118729-77-4P
	118769-83-8P	118769-84-9P	118769-85-0P	118769-86-1P
	118769-87-2P	118769-88-3P	118769-90-7P	118769-91-8P
	118769-93-0P	118769-94-1P	118769-95-2P	118769-97-4P
	118769-98-5P	118770-00-6P	118770-01-7P	118770-02-8P
	118770-03-9P	118770-04-0P	118770-05-1P	118770-06-2P
	118770-07-3P	118770-09-5P	118770-10-8P	118770-12-0P
	118770-13-1P	118770-14-2P	118770-15-3P	118770-16-4P
	118770-17-5P	118770-18-6P	118770-19-7P	118770-20-0P
	118770-21-1P	118770-22-2P	118770-24-4P	118770-26-6P
	118770-27-7P	118770-28-8P	118770-29-9P	118770-30-2P
	118770-31-3P	118770-32-4P	118770-33-5P	118770-34-6P
	118770-35-7P	118770-36-8P	118770-37-9P	118770-38-0P
	118770-40-4P	118770-41-5P	118770-42-6P	118770-43-7P
	118770-45-9P	118770-46-0P	118770-47-1P	118770-48-2P

118770-50-6P	118770-51-7P	118770-52-8P	118770-53-9P
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118770-60-8P	118770-61-9P	118770-62-0P	118770-63-1P
118770-65-3P	118770-66-4P	118770-68-6P	118770-69-7P
118770-71-1P	118770-73-3P	118770-75-5P	118770-77-7P
118770-79-9P	118770-81-3P	118770-82-4P	118770-84-6P
118770-86-8P	118770-88-0P	118770-89-1P	118770-91-5P
118770-93-7P	118770-94-8P	118770-96-0P	118770-98-2P
118771-00-9P	118804-58-3P	118804-59-4P	118804-60-7P
118858-07-4P			

RL: IMF (Industrial manufacture); PREP (Preparation)
(manuf. of oligomeric)

L47 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN

1987:440071 Document No. 107:40071 A process for the preparation of silyl ketene acetals. Revis, Anthony; Little, Michael Dean; Dinh, Paul Charles (Dow Corning Corp., USA). Eur. Pat. Appl. EP 219322 A2 19870422, 23 pp. DESIGNATED STATES: R: DE, FR, GB. (English). CODEN: EPXXDW. APPLICATION: EP 1986-307834 19861010. PRIORITY: US 1985-787287 19851015.

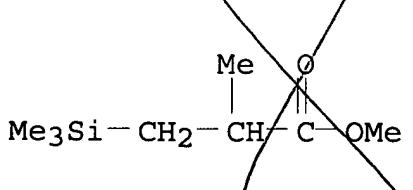
AB The title compds. are prep'd. by reaction of an organosilane with methacrylic acid, (or derivs. thereof) in the presence of RhCl₃ catalyst. Thus, 2 mol Me methacrylate was treated with 2 mol Me₃SiH at 45-75° in the presence of 0.2 g methoxyhydroquinone (polymn. inhibitor) and 0.06 g RhCl₃ to give Me₂C:C(OMe)(OSiMe₃) and lesser amts. of CH₂:CMeCH(OMe)(OSiMe₃) and Me₃SiCH₂CHMeCO₂Me as byproducts depending on the exact reaction conditions.

IT 18388-42-6P

RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, in reaction of Me methacrylate with trimethylsilane)

RN 18388-42-6 HCAPLUS

CN Propanoic acid, 2-methyl-3-(trimethylsilyl)-, methyl ester (9CI)
(CA INDEX NAME)



IC ICM C07F007-18

ICS C07F007-04; C08G077-38

CC 29-6 (Organometallic and Organometalloidal Compounds)
Section cross-reference(s): 35

IT 18388-42-6P 109081-61-0P

RL: FORM (Formation, nonpreparative); PREP (Preparation)
 (formation of, in reaction of Me methacrylate with
 trimethylsilane)

L47 ANSWER 10 OF 10 HCPLUS COPYRIGHT 2006 ACS on STN

1986:573090 Document No. 105:173090 Activation of hydrogen transfer from silicon hydrides and thiols by binuclear manganese and rhenium carbonyls in a radical telomerization. Freidlina, R. Kh.; Terent'ev, A. B.; Petrova, R. G.; Churkina, T. D.; Moskalenko, M. A. (Inst. Elementoorg. Soedin., Moscow, USSR). Doklady Akademii Nauk SSSR, 288(6), 1436-9 [Phys. Chem.] (Russian) 1986. CODEN: DANKAS. ISSN: 0002-3264.

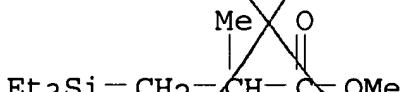
AB Mn₂(CO)10 and Re₂(CO)10 were effective catalysts for the radical telomerization of vinyl monomers with Et₃SiH and BuSH. In the telomerization of ethylene with Et₃SiH, the metal carbonyls gave 98-100% Et₄Si [631-36-7], compared with 64% in the presence of tert-Bu₂O₂ catalyst, which gave also telomers with d.p. 2-3. The Mn₂(CO)10-Et₃SiH system led to exclusive β-hydrosilylation of acrylates with practically complete exclusion of polymn. Re₂(CO)10 was a less effective catalyst than Mn₂(CO)10, but chain transfer occurred similarly in both cases. Radical silylation of unsatd. compds. with (EtO)₃SiH (I) was hindered by the reactivity of the EtO groups, but use of Mn₂(CO)10 as catalyst for the addn. of I to 1-hexene gave 15% adduct.

IT 18002-64-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of, in telomerization of Me methacrylate with
 triethylsilane, in presence of binuclear metal carbonyls)

RN 18002-64-7 HCPLUS

CN Propanoic acid, 2-methyl-3-(triethylsilyl)-, methyl ester (9CI) (CA INDEX NAME)



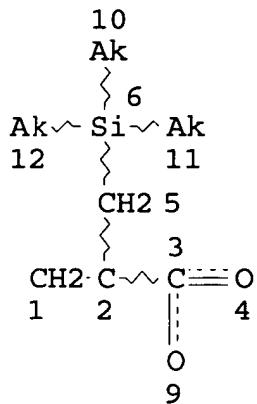
CC 35-3 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 22, 29

IT 18002-64-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of, in telomerization of Me methacrylate with
 triethylsilane, in presence of binuclear metal carbonyls)

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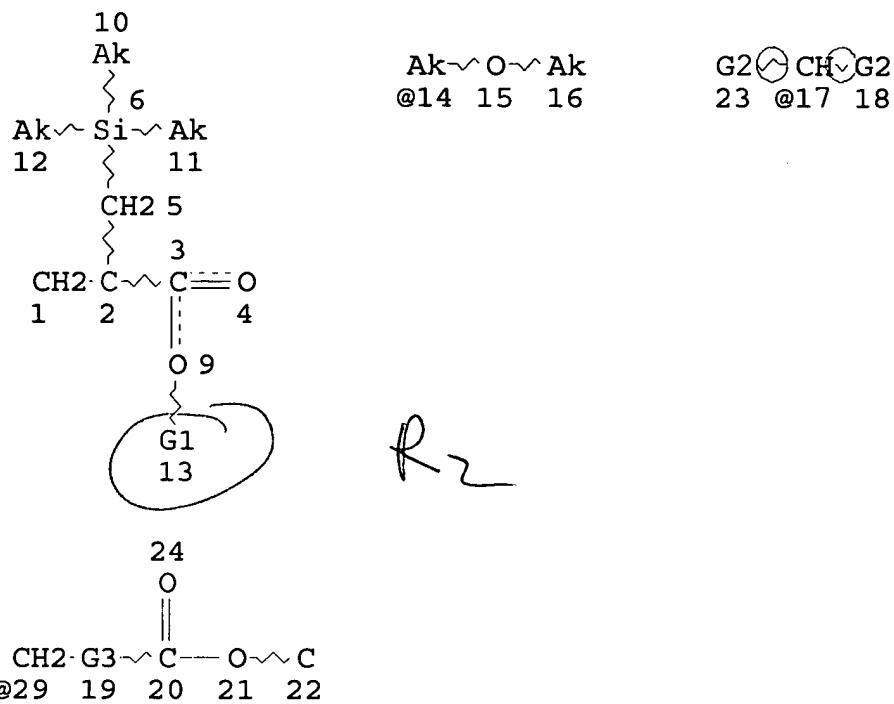
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VAR G2=C/O

REP G3=(0-5) CH2

NODE ATTRIBUTES:

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DEFAULT ECLEVEL IS LIMITED
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GRAPH ATTRIBUTES:

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NUMBER OF NODES IS 27

STEREO ATTRIBUTES: NONE

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13 ANSWERS

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L32 ANSWER 1 OF 7 HCAPLUS COPYRIGHT 2006 ACS on STN
 2004:293281 Document No. 140:329540 Polymerizable silicon-containing compound for polymer resist composition and patterning process.
 Kinsho, Takeshi; Watanabe, Takeru; Hasegawa, Koji (Japan). U.S. Pat. Appl. Publ. US 2004067436 A1 20040408, 22 pp. (English).
 CODEN: USXXCO. APPLICATION: US 2003-671732-20030929. PRIORITY: JP 2002-285171 20020930.

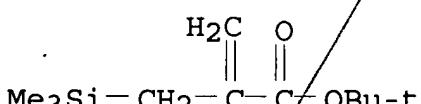
AB Polymerizable silicon-contg. compds. of formula:
 $(CH_3)_3SiCH_2C(=CH_2)C(=O)OR_1$ ($R_1 =$ hydrogen, halogen or monovalent org. group) are polymd. into polymers. A resist compn. comprising the polymer as a base resin is sensitive to high-energy radiation, has excellent sensitivity and resoln. at a wavelength of less than 300 nm, and high resistance to oxygen plasma etching, and thus lends itself to micropatterning for the fabrication of VLSIs.

IT 75366-36-8P 677775-91-6P 677775-92-7P

677775-93-8P 677775-94-9P
 RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation);
 PREP (Preparation); RACT (Reactant or reagent)
 (polymerizable silicon-contg. compd. for polymer resist compn.
 and patterning process)

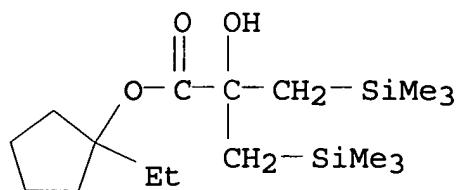
RN 75366-36-8 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



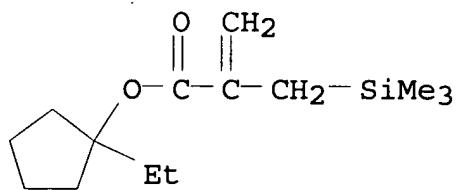
RN 677775-91-6 HCAPLUS

CN Propanoic acid, 2-hydroxy-3-(trimethylsilyl)-2-[(trimethylsilyl)methyl]-, 1-ethylcyclopentyl ester (9CI) (CA INDEX NAME)



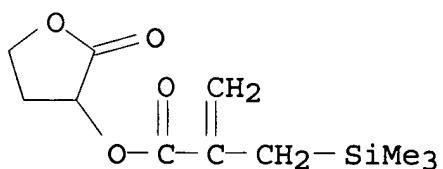
RN 677775-92-7 HCPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, 1-ethylcyclopentyl ester (9CI) (CA INDEX NAME)



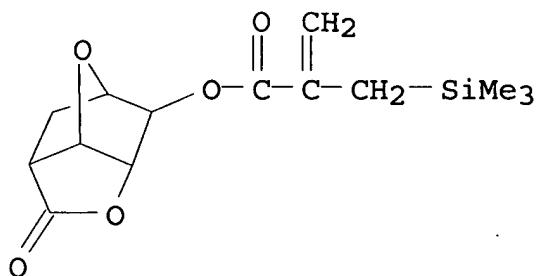
RN 677775-93-8 HCPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, tetrahydro-2-oxo-3-furanyl ester (9CI) (CA INDEX NAME)



RN 677775-94-9 HCPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, hexahydro-5-oxo-2,6-methanofuro[3,2-b]furan-3-yl ester (9CI) (CA INDEX NAME)



IT 677775-97-2P 677775-98-3P 677775-99-4P

677776-00-0P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polymerizable silicon-contg. compd. for polymer resist compn. and patterning process)

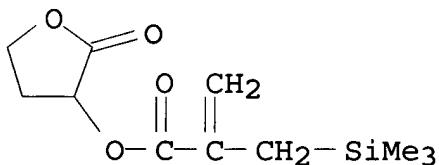
RN 677775-97-2 HCPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, 1-ethylcyclopentyl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-[(trimethylsilyl)methyl]-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 677775-93-8

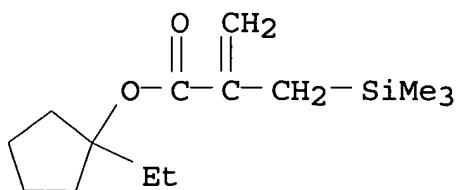
CMF C11 H18 O4 Si



CM 2

CRN 677775-92-7

CMF C14 H26 O2 Si



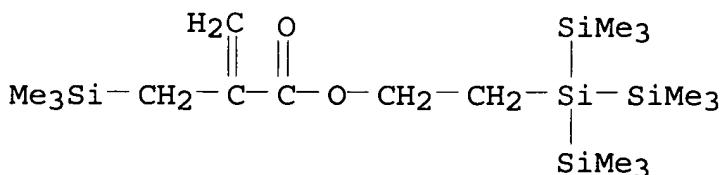
RN 677775-98-3 HCPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, 1-ethylcyclopentyl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-[(trimethylsilyl)methyl]-2-propenoate and 2-[2,2,2-trimethyl-1,1-bis(trimethylsilyl)disilanyl]ethyl 2-[(trimethylsilyl)methyl]-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 677775-96-1

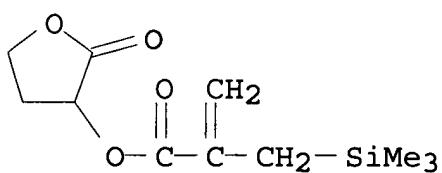
CMF C18 H44 O2 Si5



CM 2

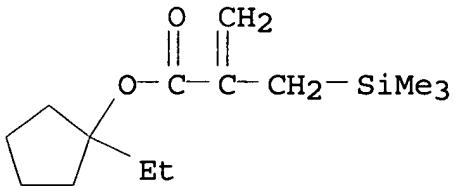
CRN 677775-93-8

CMF C11 H18 O4 Si



CM 3

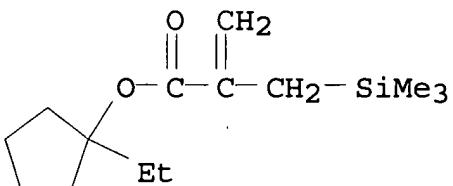
CRN 677775-92-7
 CMF C14 H26 O2 Si



RN 677775-99-4 HCPLUS
 CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, 1-ethylcyclopentyl ester, polymer with ethenylheptamethylcyclotetrasiloxane and 2,5-furandione (9CI) (CA INDEX NAME)

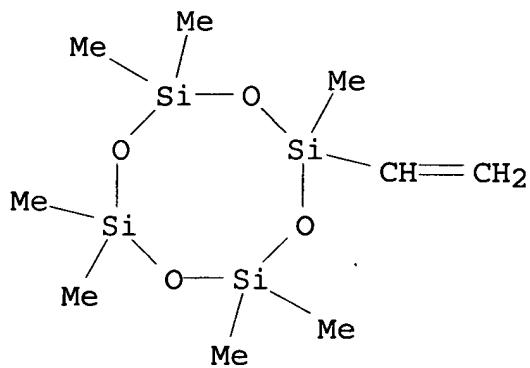
CM 1

CRN 677775-92-7
 CMF C14 H26 O2 Si

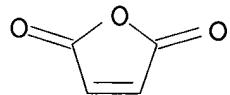


CM 2

CRN 3763-39-1
 CMF C9 H24 O4 Si4

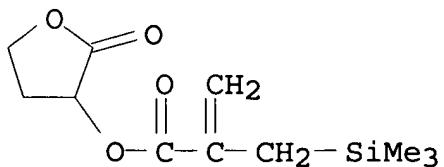


CM 3

CRN 108-31-6
CMF C4 H2 O3

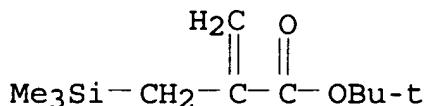
RN 677776-00-0 HCPLUS
 CN 2-Propenoic acid, 2-[{(trimethylsilyl)methyl]-, 1,1-dimethylethyl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-[(trimethylsilyl)methyl]-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 677775-93-8
CMF C11 H18 O4 Si

CM 2

CRN 75366-36-8
 CMF C11 H22 O2 Si



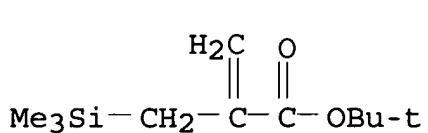
IC ICM G03C001-73
 ICS G03F007-039; G03F007-20; G03F007-30; G03F007-38; G03F007-36
 INCL 430270100; 430905000; 430907000; 430910000; 430326000; 430914000;
 430327000; 430328000; 430331000; 430313000
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)
 IT 74976-84-4P 75366-35-7P **75366-36-8P** 100548-24-1P
677775-91-6P 677775-92-7P 677775-93-8P
677775-94-9P 677775-96-1P
 RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation);
 PREP (Preparation); RACT (Reactant or reagent)
 (polymerizable silicon-contg. compd. for polymer resist compn.
 and patterning process)
 IT **677775-97-2P 677775-98-3P 677775-99-4P**
677776-00-0P
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or
 engineered material use); PREP (Preparation); USES (Uses)
 (polymerizable silicon-contg. compd. for polymer resist compn.
 and patterning process)

L32 ANSWER 2 OF 7 HCPLUS COPYRIGHT 2006 ACS on STN
 1991:143865 Document No. 114:143865 Chain elongation of
 aldonolactones. Csuk, Rene; Glaenzer, Brigitte I. (Pharm.-Chem.
 Inst., Univ. Heidelberg, Heidelberg, D-6900, Germany). Journal of
 Carbohydrate Chemistry, 9(6), 809-22 (English) 1990. CODEN: JCACDM.
 ISSN: 0732-8303. OTHER SOURCES: CASREACT 114:143865.

AB As an alternative to the classical Reformatskii-type branching
 reaction of aldonolactones, Me₃SiCH₂CO₂Et, Me₃SiCHMeCO₂Et,
 Me₃SiCH₂CN, or alkyl 2-(trimethylsilylmethyl)acrylates and catalytic
 amts. of Bu₄NF can be used. The chain-elongated monosaccharides are
 obtained in high yields.

IT **75366-36-8**
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (homologation by, of aldonolactones)

RN 75366-36-8 HCPLUS
 CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



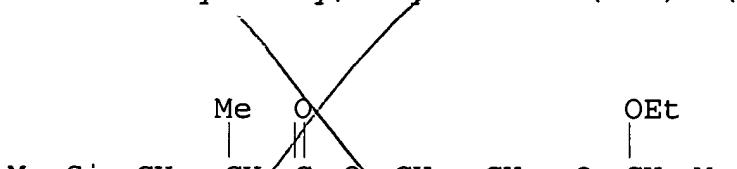
CC 33-8 (Carbohydrates)
 IT 4071-88-9, Ethyl trimethylsilylacetate 18293-53-3 55453-09-3
 74976-84-4 75366-36-8
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (homologation by, of aldonolactones)

L32 ANSWER 3 OF 7 HCPLUS COPYRIGHT 2006 ACS on STN
 1987:440071 Document No. 107:40071 A process for the preparation of silyl ketene acetals. Revis, Anthony; Little, Michael Dean; Dinh, Paul Charles (Dow Corning Corp., USA). Eur. Pat. Appl. EP 219322 A2 19870422, 23 pp. DESIGNATED STATES: R: DE, FR, GB. (English). CODEN: EPXXDW. APPLICATION: EP 1986-307834 19861010. PRIORITY: US 1985-787287 19851015.

AB The title compds. are prep'd. by reaction of an organosilane with methacrylic acid, (or derivs. thereof) in the presence of RhCl₃ catalyst. Thus, 2 mol Me methacrylate was treated with 2 mol Me₃SiH at 45-75° in the presence of 0.2 g methoxyhydroquinone (polymn. inhibitor) and 0.06 g RhCl₃ to give Me₂C:C(OMe)(OSiMe₃) and lesser amts. of CH₂:CMeCH(OMe)(OSiMe₃) and Me₃SiCH₂CHMeCO₂Me as byproducts depending on the exact reaction conditions.

IT 109081-65-4P
 RL: FORM (Formation, nonpreparative); PREP (Preparation)
 (formation of, in reaction of methyl(dioxyheptyl) methacrylate with trimethylsilane)

RN 109081-65-4 HCPLUS
 CN Propanoic acid, 2-methyl-3-(trimethylsilyl)-, 2-(1-ethoxyethoxy)ethyl ester (9CI) (CA INDEX NAME)

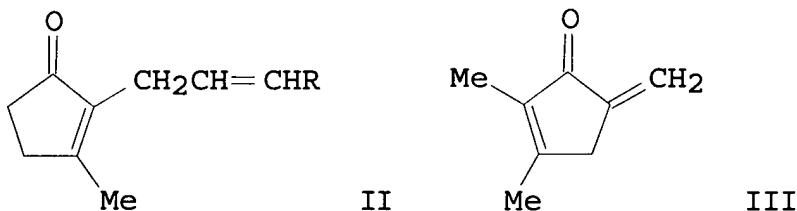


IC ICM C07F007-18

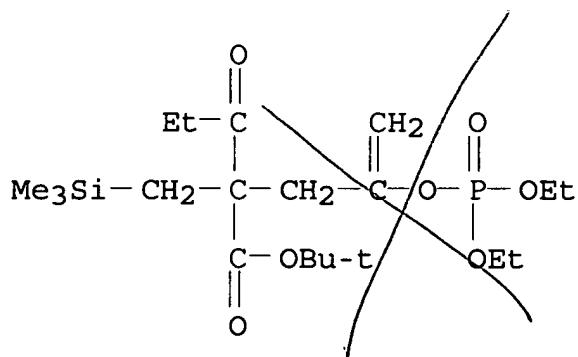
CC ICS C07F007-04; C08G077-38
 29-6 (Organometallic and Organometalloidal Compounds)
 Section cross-reference(s): 35
 IT 109081-64-3P **109081-65-4P**
 RL: FORM (Formation, nonpreparative); PREP (Preparation)
 (formation of, in reaction of methyl(dioxyheptyl) methacrylate
 with trimethylsilane)

L32 ANSWER 4 OF 7 HCAPLUS COPYRIGHT 2006 ACS on STN
 1987:195921 Document No. 106:195921 3-Chloro-2-[
 [(diethoxyphosphoryl)oxy]-1-propene: a new reagent for a one-pot
 cyclopentenone annelation. Synthesis of desoxyallethrolone,
 cis-jasmone, and methylenomycin B. Welch, S. C.; Assercq, J. M.;
 Loh, J. P.; Glase, S. A. (Dep. Chem., Univ. Houston, Houston, TX,
 77004, USA). Journal of Organic Chemistry, 52(8), 1440-50 (English)
 1987. CODEN: JOCEAH. ISSN: 0022-3263. OTHER SOURCES: CASREACT
 106:195921.

GI



AB Alkylation studies of the title reagent (I) and other enol phosphate-based electrophiles with various nucleophiles are discussed. The application of I to the synthesis of deoxyallethrolone (II, R = H), cis-jasmone (II, R = Et), and methylenomycin B (III) is presented.
 IT **106763-46-6P**
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (prepn. and cyclization of)
 RN 106763-46-6 HCAPLUS
 CN 4-Pentenoic acid, 4-[(diethoxyphosphinyl)oxy]-2-(1-oxopropyl)-2-[(trimethylsilyl)methyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



CC 24-5 (Alicyclic Compounds)
 IT 1703-51-1P 6126-53-0P 62359-08-4P 67262-88-8P
106763-46-6P 106763-48-8P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
 RACT (Reactant or reagent)
 (prep. and cyclization of)

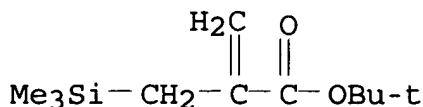
L32 ANSWER 5 OF 7 HCPLUS COPYRIGHT 2006 ACS on STN
 1982:35532 Document No. 96:35532 Allylcarboxylic acid derivatives.
 (Sakurai, Hideki, Japan). Jpn. Kokai Tokkyo Koho JP 56110693 A2
 19810901 Showa, 7 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP
 1980-14170 19800207.

AB Allylcarboxylic acid derivs. $\text{Me}_3\text{SiCH}_2\text{C}(\text{:CH}_2)\text{COR}$ (I, R = OH, OEt, OSiMe₃, Cl, OCMe₃) were prep'd. Thus, 168 g H₂C(CO₂Et)₂ in EtOH was added to 23 g Na in EtOH over 30 min under N, the mixt. refluxed 30 min, 123 g Me₃SiCl added over 2 h, and the whole stirred 24 h with heating to give 81% Me₃SiCH₂CH(CO₂Et)₂ (II). A mixt. of 25.4 g II and 5.3 g 50% oily NaH in C₆H₆ was stirred 1.5 h, 26 g CH₂Br₂ added, and the whole stirred 5 h with heating to give 84% Me₃SiCH₂C(CH₂Br)(CO₂Et)₂ (III). Stirring 63 g III with 39.6 g 85% KOH in aq. EtOH 25 h with heating gave 82% I (R = OH) and 15% I (R = OEt).

IT 75366-36-8P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prep. of)

RN 75366-36-8 HCPLUS

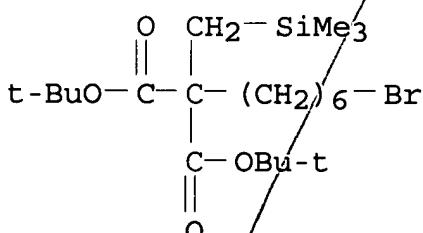
CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



IC C07F007-08; C07F007-18; C07F007-22
 CC 29-6 (Organometallic and Organometalloidal Compounds)
 IT 26449-03-6P 26613-71-8P 56407-78-4P 74976-84-4P 75366-35-7P
75366-36-8P 75366-37-9P 75366-39-1P 75366-40-4P
 75366-41-5P 75366-43-7P 80421-81-4P 80421-82-5P 80421-83-6P
 80421-84-7P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

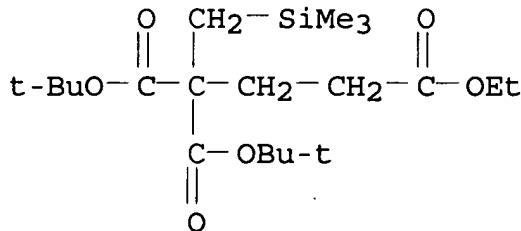
L32 ANSWER 6 OF 7 HCPLUS COPYRIGHT 2006 ACS on STN
 1981:54841 Document No. 94:54841 Electroorganic chemistry. 48. A
 novel synthesis of terminal olefins by anodic oxidation of
 carboxylic acids having a trimethylsilyl group on the
 β -position. Shono, Tatsuya; Omizu, Hiroshi; Kise, Naoki (Fac.
 Eng., Kyoto Univ., Kyoto, 606, Japan). Chemistry Letters (12),
 1517-20 (English) 1980. CODEN: CMLTAG. ISSN: 0366-7022.
 AB Anodic oxidn. of carboxylic acids having a trimethylsilyl group on
 the β -position gave exclusively terminal olefins in reasonable
 yields. Thus, 1-tetradecene was formed in 83% yield by anodic
 oxidn. on C in MeCN-MeOH at const. c.d. 0.017 A/cm².
 IT **76402-32-9P 76419-44-8P**
 RL: FORM (Formation, nonpreparative); PREP (Preparation)
 (formation of, by reaction of di-tert-
 butyltrimethylsilylmethylmalonate with corresponding alkyl
 bromide)

RN 76402-32-9 HCPLUS
 CN Propanedioic acid, (6-bromohexyl)[(trimethylsilyl)methyl]-,
 bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



RN 76419-44-8 HCAPLUS

CN 1,1,3-Propanetricarboxylic acid, 1-[(trimethylsilyl)methyl]-, 1,1-bis(1,1-dimethylethyl) 3-ethyl ester (9CI) (CA INDEX NAME)



CC 72-8 (Electrochemistry)

Section cross-reference(s): 22, 23

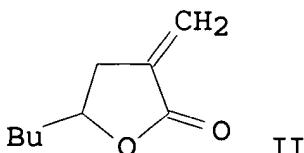
IT 76402-32-9P 76419-44-8P

RL: FORM (Formation, nonpreparative); PREP (Preparation)
 (formation of, by reaction of di-tert-
 butyltrimethylsilylmethylmalonate with corresponding alkyl
 bromide)

L32 ANSWER 7 OF 7 HCAPLUS COPYRIGHT 2006 ACS on STN

1980:604013 Document No. 93:204013 Chemistry of organosilicon
 compounds. 134. (2-Alkoxy carbonylallyl) trimethylsilanes as new
 reagents of 2-alkoxy carbonylallylation of electrophiles. Hosomi,
 Akira; Hashimoto, Hidehiko; Sakurai, Hideki (Dep. Chem., Tohoku
 Univ., Sendai, 980, Japan). Tetrahedron Letters, 21(10), 951-4
 (English) 1980. CODEN: TELEAY. ISSN: 0040-4039. OTHER SOURCES:
 CASREACT 93:204013.

GI



AB Reaction of 2-alkoxy carbonylsilanes with acetals and carbonyl compds. in the presence of Lewis acids gave alkoxy carbonylallylated products. Thus, $\text{Me}_3\text{SiCH}_2\text{C}(:\text{CH}_2)\text{CO}_2\text{Et}$ (I) with MeCH(OEt)_2 and TiCl_4 at 0° for 6 h gave 89% $\text{EtO}_2\text{C}(:\text{CH}_2)\text{CHMeOEt}$. Similarly I with

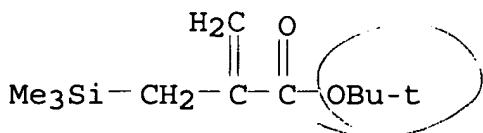
BuCHO and TiCl₄ at 0-25° for 3 h gave 25% II. I was prep'd. from CH₂(CO₂Et)₂ and Me₃SiCH₂Cl.

IT 75366-36-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, with acetals)

RN 75366-36-8 HCPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



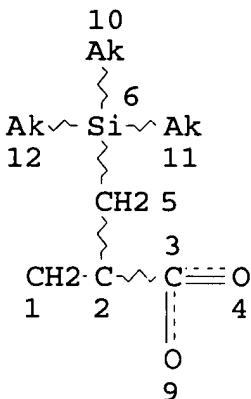
CC 23-17 (Aliphatic Compounds)

IT 56407-78-4P 74976-84-4P 75366-35-7P 75366-36-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, with acetals)

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NODE ATTRIBUTES:

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CONNECT IS E1 RC AT 12

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DEFAULT ECLEVEL IS LIMITED

SLee 10/671,732

Page 34

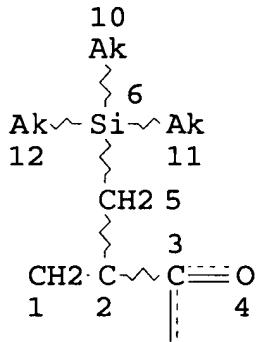
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RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE

L8 138 SEA FILE=REGISTRY SSS FUL L6
L25 STR



Hy
13

13

NODE ATTRIBUTES:

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CONNECT IS E1 RC AT 11

CONNECT IS E1 RC AT 12

DEFINITION OF MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMIT

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SECTION 15 MAILED 11-15

GRAPH ATTRIBUTES:

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NUMBER OF NODES IS 11

NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE

L27 5 SEA FILE=REGISTRY SUB=L8 SSS FUL L25

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5 ANSWERS

SEARCH TIME: 00.00.01

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Applicant

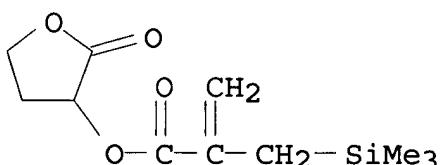
L33 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2006 ACS on STN
 2004:293281 Document No. 140:329540 Polymerizable silicon-containing compound for polymer resist composition and patterning process.
 Kinsho, Takeshi; Watanabe, Takeru; Hasegawa, Koji (Japan). U.S. Pat. Appl. Publ. US 2004067436 A1 20040408, 22 pp. (English).
 CODEN: USXXCO. APPLICATION: US 2003-671732 20030929. PRIORITY: JP 2002-285171 20020930.

AB Polymerizable silicon-contg. compds. of formula:
 $(CH_3)_3SiCH_2C(=CH_2)C(=O)OR_1$ (R_1 = hydrogen, halogen or monovalent org. group) are polymd. into polymers. A resist compn. comprising the polymer as a base resin is sensitive to high-energy radiation, has excellent sensitivity and resoln. at a wavelength of less than 300 nm, and high resistance to oxygen plasma etching, and thus lends itself to micropatterning for the fabrication of VLSIs.

IT 677775-93-8P 677775-94-9P
 RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (polymerizable silicon-contg. compd. for polymer resist compn. and patterning process)

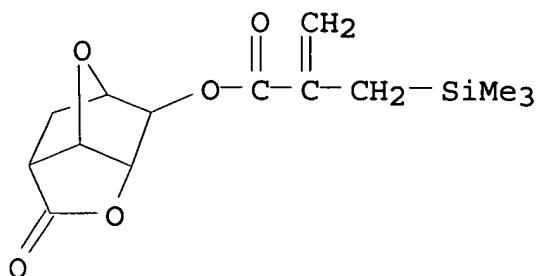
RN 677775-93-8 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, tetrahydro-2-oxo-3-furanyl ester (9CI) (CA INDEX NAME)



RN 677775-94-9 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, hexahydro-5-oxo-2,6-methanofuro[3,2-b]furan-3-yl ester (9CI) (CA INDEX NAME)



IT 677775-97-2P 677775-98-3P 677776-00-0P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polymerizable silicon-contg. compd. for polymer resist compn. and patterning process)

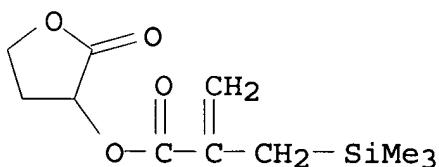
RN 677775-97-2 HCPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, 1-ethylcyclopentyl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-[(trimethylsilyl)methyl]-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 677775-93-8

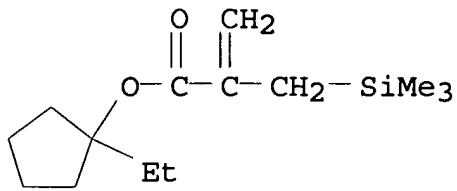
CMF C11 H18 O4 Si



CM 2

CRN 677775-92-7

CMF C14 H26 O2 Si



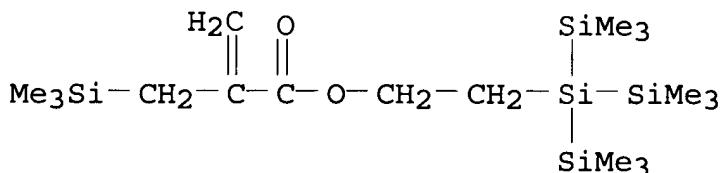
RN 677775-98-3 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, 1-ethylcyclopentyl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-[(trimethylsilyl)methyl]-2-propenoate and 2-[2,2,2-trimethyl-1,1-bis(trimethylsilyl)disilanyl]ethyl 2-[(trimethylsilyl)methyl]-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 677775-96-1

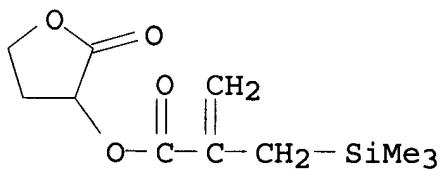
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CM 2

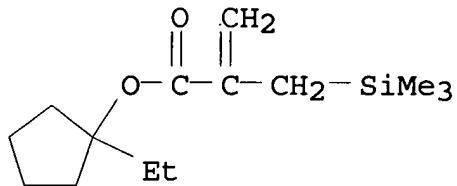
CRN 677775-93-8

CMF C11 H18 O4 Si



CM 3

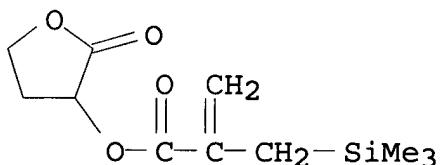
CRN 677775-92-7
 CMF C14 H26 O2 Si



RN 677776-00-0 HCPLUS
 CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, 1,1-dimethylethyl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-[(trimethylsilyl)methyl]-2-propenoate (9CI) (CA INDEX NAME)

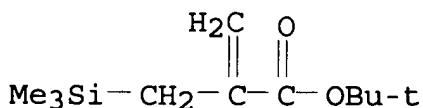
CM 1

CRN 677775-93-8
 CMF C11 H18 O4 Si



CM 2

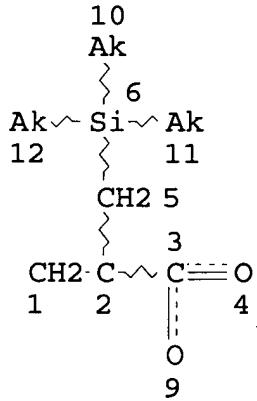
CRN 75366-36-8
 CMF C11 H22 O2 Si



IC ICM G03C001-73
 ICS G03F007-039; G03F007-20; G03F007-30; G03F007-38; G03F007-36

INCL 430270100; 430905000; 430907000; 430910000; 430326000; 430914000;
 430327000; 430328000; 430331000; 430313000
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)
 IT 74976-84-4P 75366-35-7P 75366-36-8P 100548-24-1P
 677775-91-6P 677775-92-7P **677775-93-8P**
677775-94-9P 677775-96-1P
 RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation);
 PREP (Preparation); RACT (Reactant or reagent)
 (polymerizable silicon-contg. compd. for polymer resist compn.
 and patterning process)
 IT **677775-97-2P** **677775-98-3P** 677775-99-4P
677776-00-0P
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or
 engineered material use); PREP (Preparation); USES (Uses)
 (polymerizable silicon-contg. compd. for polymer resist compn.
 and patterning process)

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 L6 STR



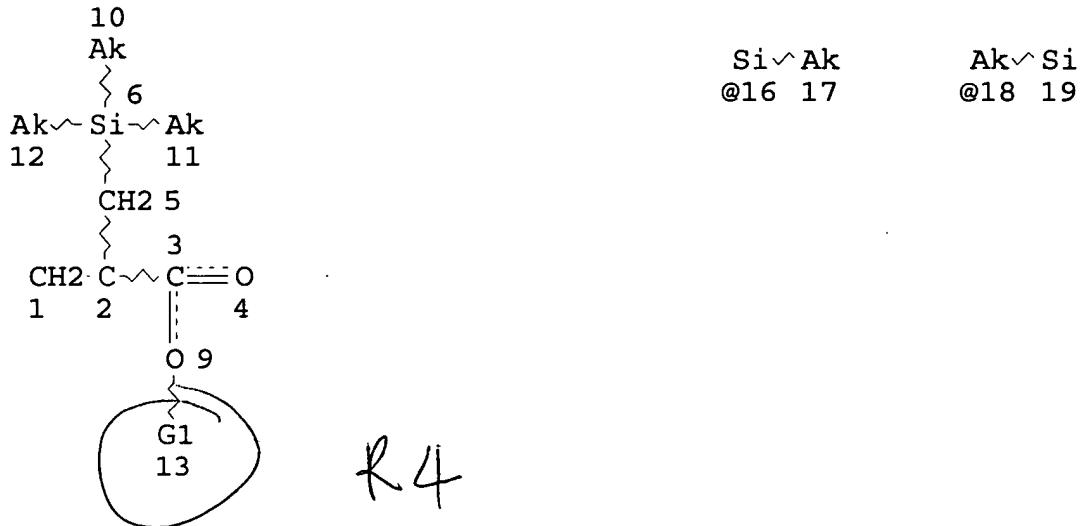
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 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE

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VAR G1=16/18/20

NODE ATTRIBUTES:

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DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

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GRAPH ATTRIBUTES:

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NUMBER OF NODES IS 18

STEREO ATTRIBUTES: NONE

L30 8 SEA FILE=REGISTRY SUB=L8 SSS FUL L28

100.0% PROCESSED 27 ITERATIONS
SEARCH TIME: 00.00.01

8 ANSWERS

Applicant

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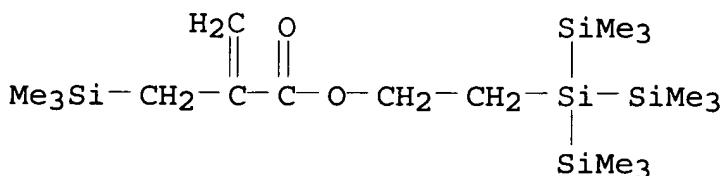
L34 ANSWER 1>OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN
 2004:293281 Document No. 140:329540 Polymerizable silicon-containing compound for polymer resist composition and patterning process. Kinsho, Takeshi; Watanabe, Takeru; Hasegawa, Koji (Japan). U.S. Pat. Appl. Publ. US 2004067436 A1 20040408, 22 pp. (English). CODEN: USXXCO. APPLICATION: US 2003-671732 20030929. PRIORITY: JP 2002-285171 20020930.

AB Polymerizable silicon-contg. compds. of formula: $(CH_3)_3SiCH_2C(=CH_2)C(=O)OR_1$ (R_1 = hydrogen, halogen or monovalent org. group) are polymd. into polymers. A resist compn. comprising the polymer as a base resin is sensitive to high-energy radiation, has excellent sensitivity and resoln. at a wavelength of less than 300 nm, and high resistance to oxygen plasma etching, and thus lends itself to micropatterning for the fabrication of VLSIs.

IT 677775-96-1P
 RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (polymerizable silicon-contg. compd. for polymer resist compn. and patterning process)

RN 677775-96-1 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, 2-[2,2,2-trimethyl-1,1-bis(trimethylsilyl)disilanyl]ethyl ester (9CI) (CA INDEX NAME)



IT 677775-98-3P
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polymerizable silicon-contg. compd. for polymer resist compn. and patterning process)

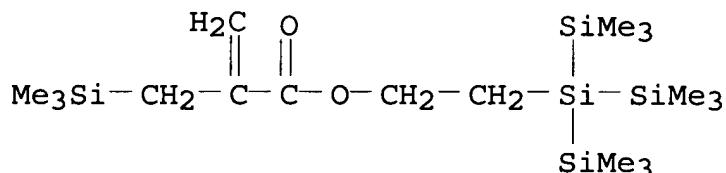
RN 677775-98-3 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, 1-ethylcyclopentyl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-[(trimethylsilyl)methyl]-2-propenoate and 2-[2,2,2-trimethyl-1,1-

bis(trimethylsilyl)disilanylethyl 2-[(trimethylsilyl)methyl]-2-propenoate (9CI) (CA INDEX NAME)

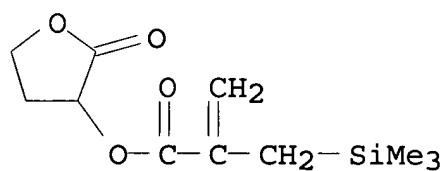
CM 1

CRN 677775-96-1
CMF C18 H44 O2 Si5



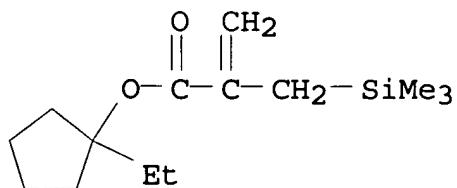
CM 2

CRN 677775-93-8
CMF C11 H18 O4 Si



CM 3

CRN 677775-92-7
CMF C14 H26 O2 Si



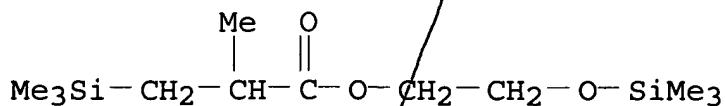
IC ICM G03C001-73
 ICS G03F007-039; G03F007-20; G03F007-30; G03F007-38; G03F007-36
 INCL 430270100; 430905000; 430907000; 430910000; 430326000; 430914000;
 430327000; 430328000; 430331000; 430313000
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)
 IT 74976-84-4P 75366-35-7P 75366-36-8P 100548-24-1P
 677775-91-6P 677775-92-7P 677775-93-8P 677775-94-9P
677775-96-1P
 RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation);
 PREP (Preparation); RACT (Reactant or reagent)
 (polymerizable silicon-contg. compd. for polymer resist compn.
 and patterning process)
 IT 677775-97-2P **677775-98-3P** 677775-99-4P 677776-00-0P
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or
 engineered material use); PREP (Preparation); USES (Uses)
 (polymerizable silicon-contg. compd. for polymer resist compn.
 and patterning process)

L34 ANSWER 2 OF 10 HCPLUS COPYRIGHT 2006 ACS on STN
 1993:495822 Document No. 119:95822 Process for preparation of silyl
 ketene acetals. Dinh, Paul C.; Gray, Jeff A.; Lo, Peter Y. K. (Dow
 Corning Corp., USA). U.S. US 5208358 A 19930504, 5 pp. (English).
 CODEN: USXXAM. APPLICATION: US 1992-912433 19920713.

AB The title compds. R12CHCR1:C(OSiR3) (OR2) [R = C1-20 alkyl or alkoxy,
 C4-20 cycloalkyl, halogenated hydrocarbyl, aryl, aryloxy; R1 = H, R;
 R2 = C1-20 alkyl, halogenated hydrocarbyl, aryl, triorganosilyl,
 (CH2)nOR3 (n = 1-10; R3 = alkyl, cycloalkyl, halogenated
 hydrocarbyl, aryl, triorganosilyl)] were prep'd. by reaction of R3SiH
 with R12C:CR1CO2R2 in presence of RhCl(Me3CSCMe3)2 catalyst at
 20-100°. E.g., Me methacrylate (111 g) and 1.23 g of a
 toluene soln. contg. 0.0285 g of the catalyst and 0.297 g of
 2,6-di-tert-butyl-4-methylphenol (radical inhibitor) were treated
 with Me3SiH (107 g) at 55-60°. After addn. of 110%
 stoichiometric amt. of Me3SiH, the yield of Me2C:C(OMe)OSiMe3 was
 80.5%, along with CH2:CMeCH(OMe)OSiMe3 (4.6%) and Me3SiCH2CHMeCO2Me
 (0.7%).

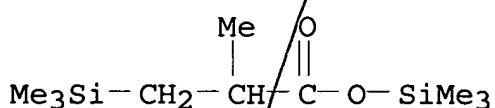
IT **148876-29-3P 148876-31-7P**
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

RN 148876-29-3 HCPLUS
 CN Propanoic acid, 2-methyl-3-(trimethylsilyl)-, 2-
 [(trimethylsilyl)oxy]ethyl ester (9CI) (CA INDEX NAME)



RN 148876-31-7 HCPLUS

CN Propanoic acid, 2-methyl-3-(trimethylsilyl)-, trimethylsilyl ester
(9CI) (CA INDEX NAME)



IC ICM C07F007-08

ICS C07F007-18

INCL 556445000

CC 29-6 (Organometallic and Organometalloidal Compounds)

IT 18388-42-6P 31469-15-5P 31469-25-7P 85248-36-8P 109081-61-0P
109081-63-2P 148876-28-2P **148876-29-3P** 148876-30-6P
148876-31-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

L34 ANSWER 3 OF 10 HCPLUS COPYRIGHT 2006 ACS on STN

1982 35532 Document No. 96:35532 Allylcarboxylic acid derivatives.

(Sakurai, Hideki, Japan). Jpn. Kokai Tokkyo Koho JP 56110693 A2

19810901 Showa, 7 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP
1980-14170 19800207.

AB Allylcarboxylic acid derivs. $\text{Me}_3\text{SiCH}_2\text{C}(:\text{CH}_2)\text{COR}$ (I, R = OH, OEt, OSiMe₃, Cl, OCMe₃) were prep'd. Thus, 168 g H₂C(CO₂Et)₂ in EtOH was added to 23 g Na in EtOH over 30 min under N, the mixt. refluxed 30 min, 123 g Me₃SiCl added over 2 h, and the whole stirred 24 h with heating to give 81% Me₃SiCH₂CH(CO₂Et)₂ (II). A mixt. of 25.4 g II and 5.3 g 50% oily NaH in C₆H₆ was stirred 1.5 h, 26 g CH₂Br₂ added, and the whole stirred 5 h with heating to give 84% Me₃SiCH₂C(CH₂Br)(CO₂Et)₂ (III). Stirring 63 g III with 39.6 g 85% KOH in aq. EtOH 25 h with heating gave 82% I (R = OH) and 15% I (R = OEt).

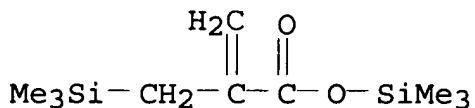
IT 56407-78-4P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 56407-78-4 HCPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, trimethylsilyl ester

(9CI) (CA INDEX NAME)



IC C07F007-08; C07F007-18; C07F007-22

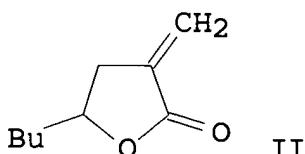
CC 29-6 (Organometallic and Organometalloidal Compounds)

IT 26449-03-6P 26613-71-8P **56407-78-4P** 74976-84-4P
75366-35-7P 75366-36-8P 75366-37-9P 75366-39-1P 75366-40-4P
75366-41-5P 75366-43-7P 80421-81-4P 80421-82-5P 80421-83-6P
80421-84-7PRL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

L34 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN

1980:604013 Document No. 93:204013 Chemistry of organosilicon
compounds. 134. (2-Alkoxy carbonylallyl)trimethylsilanes as new
reagents of 2-alkoxy carbonylallylation of electrophiles. Hosomi,
Akira; Hashimoto, Hidehiko; Sakurai, Hideki (Dep. Chem., Tohoku
Univ., Sendai, 980, Japan). Tetrahedron Letters, 21(10), 951-4
(English) 1980. CODEN: TELEAY. ISSN: 0040-4039. OTHER SOURCES:
CASREACT 93:204013.

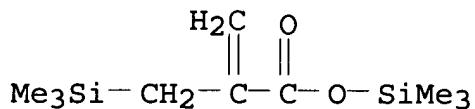
GI

AB Reaction of 2-alkoxy carbonylsilanes with acetals and carbonyl compds. in the presence of Lewis acids gave alkoxy carbonylallylated products. Thus, $\text{Me}_3\text{SiCH}_2\text{C}(:\text{CH}_2)\text{CO}_2\text{Et}$ (I) with MeCH(OEt)_2 and TiCl_4 at 0° for 6 h gave 89% $\text{EtO}_2\text{C}(:\text{CH}_2)\text{CHMeOEt}$. Similarly I with BuCHO and TiCl_4 at $0-25^\circ$ for 3 h gave 25% II. I was prep'd. from $\text{CH}_2(\text{CO}_2\text{Et})_2$ and $\text{Me}_3\text{SiCH}_2\text{Cl}$.IT **56407-78-4P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
 RACT (Reactant or reagent)
 (prepn. and reaction of, with acetals)

RN 56407-78-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, trimethylsilyl ester
 (9CI) (CA INDEX NAME)



CC 23-17 (Aliphatic Compounds)

IT 56407-78-4P 74976-84-4P 75366-35-7P 75366-36-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
 RACT (Reactant or reagent)
 (prepn. and reaction of, with acetals)

L34 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN

1977:535569 Document No. 87:135569 Reaction of hydrosilanes with
 methacrylic acid esters. Grishko, A. N.; Nefed'eva, S. A.;
 Suvorova, T. G. (USSR). Sintez Vysokomolekul. Produktov na Osnove
 Sapropelitov i Kremniiorgan. Soedin. (Ch. 1), 10-16 From: Ref. Zh.,
 Khim. 1977, Abstr. No. 8ZH339 (Russian) 1976.

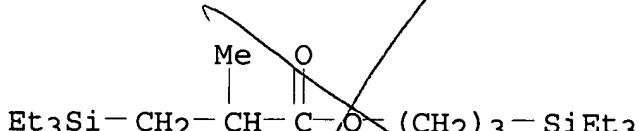
AB Title only translated.

IT 63620-23-5P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

RN 63620-23-5 HCAPLUS

CN Propanoic acid, 2-methyl-3-(triethylsilyl)-, 3-(triethylsilyl)propyl
 ester (9CI) (CA INDEX NAME)



CC 29-6 (Organometallic and Organometalloidal Compounds)

IT 63620-07-5P 63620-08-6P 63620-09-7P 63620-10-0P 63620-11-1P
 63620-12-2P 63620-13-3P 63620-14-4P 63620-15-5P 63620-16-6P
 63620-17-7P 63620-18-8P 63620-19-9P 63620-20-2P 63620-21-3P
63620-23-5P 63657-53-4P

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of)

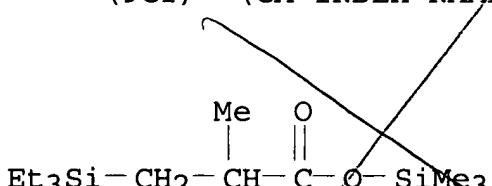
L34 ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN
 1977:190126 Document No. 86:190126 Trialkyl(triorganylsilylacyloxy)stannanes and trialkyl(triorganylsilylalkylthio)stannanes and their bactericidal and fungicidal activity. Voronkov, M. G.; Mirskov, R. G.; Stankevich, O. S.; Sitnikova, S. P.; Orgil'yanov, L. V.; Malkova, T. I.; Platonova, A. T. (Irkutsk. Inst. Org. Khim., Irkutsk, USSR). Izvestiya Sibirskogo Otdeleniya Akademii Nauk SSSR, Seriya Khimicheskikh Nauk (1), 128-34 (Russian) 1977. CODEN: IZSKAB. ISSN: 0002-3426.

AB Sixteen title compds. $\text{Et}_3\text{SnO}_2\text{CCH}_2\text{SiR}_1\text{R}_2\text{R}_3$ (I, R = H, Me; R₁, R₂, R₃ = Me, Et, EtO) and $\text{R}_4\text{SnS}(\text{CH}_2)_n\text{SiR}_5$ (II, R₄ = Et, Bu; R₅ = Me, MeO, Et, EtO; n = 1-3) were prep'd. in 47-97% yields. Thus, heating $\text{Me}_3\text{SiO}_2\text{CCH}_2\text{CH}_2\text{SiEt}_3$ with Et_3SnOMe at 140-5° 2 h gave 49% $\text{Et}_3\text{SnO}_2\text{CCH}_2\text{CH}_2\text{SiEt}_3$. I and II exhibit bactericidal and fungicidal activity when tested against *Staphylococcus aureas*, *Escherichia coli*, *Aspergillus niger*, *Penicillium cyclopium*, etc., and are bactericidal and fungicidal additives for polymers.

IT 43123-27-9
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
 (fungicidal activity of)

RN 43123-27-9 HCAPLUS

CN Propanoic acid, 2-methyl-3-(triethylsilyl)-, trimethylsilyl ester (9CI) (CA INDEX NAME)



CC 29-8 (Organometallic and Organometalloidal Compounds)
 Section cross-reference(s): 5

IT 56-35-9 43123-27-9 62924-45-2
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
 (fungicidal activity of)

L34 ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN

1976:105703 Document No. 84:105703 Trialkyl(triorganylsilylacyloxy)stannanes. Voronkov, M. G.; Mirskov, R. G.; Ishchenko, O. S.; Sitnikova, S. P. (Irkutsk. Inst. Org. Khim., Irkutsk, USSR). Zhurnal Obshchey Khimii, 45(12), 2634-8 (Russian) 1975. CODEN:

ZOKHA4. ISSN: 0044-460X.

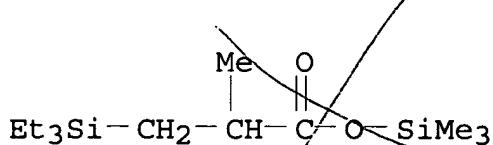
AB Hydrosilylation of H₂C:CRCO₂SiMe₃ with HSiR₁R₂ gave .apprx.11-56% yield of 6 Me₃SiO₂CCHRCH₂SiR₁R₂, which were transesterified with R₃SnOH, (R₃Sn)₂O, or R₃SnOMe to give 50-90% yield of 9 R₃SnO₂CCHRCH₂SiR₁R₂ (R = H, Me; R₁ = Me, Et, OEt; R₂ = Et, OEt; R₃ = Et, Bu). Thus, hydrosilylation of 15.8 g Me₃SiO₂CCMe:CH₂ with 11.6 g Et₃SiH gave 55.6% Me₃SiO₂CCHMeCH₂SiEt₃, which, with Et₃SnOMe gave 97.7% Et₃SnO₂CCHMeCH₂SiEt₃ (I), with (Et₃Sn)₂O gave 87% I, and with Et₃SnOH gave 80.7% I.

IT **43123-27-9P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and transesterification of, with tin org. compds.)

RN 43123-27-9 HCPLUS

CN Propanoic acid, 2-methyl-3-(triethylsilyl)-, trimethylsilyl ester
(9CI) (CA INDEX NAME)

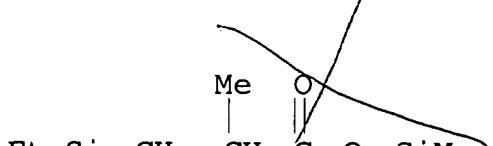


IT **43123-27-9**

RL: RCT (Reactant); RACT (Reactant or reagent)
(transesterification of, with triethyl(methoxy)stannanes)

RN 43123-27-9 HCPLUS

CN Propanoic acid, 2-methyl-3-(triethylsilyl)-, trimethylsilyl ester
(9CI) (CA INDEX NAME)



CC 29-8 (Organometallic and Organometalloidal Compounds)

IT 23416-03-7P 23416-05-9P **43123-27-9P** 58566-94-2P

58566-95-3P 58566-96-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and transesterification of, with tin org. compds.)

IT **43123-27-9**

RL: RCT (Reactant); RACT (Reactant or reagent)
(transesterification of, with triethyl(methoxy)stannanes)

L34 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN
 1975:478500 Document No. 83:78500 Flash thermolysis of silyl esters of malonic acid. New route to ketenes. Thermal rearrangements of trimethylsilyl diester of cyclopropane-1,1-dicarboxylic acid.
 Bloch, R.; Denis, J. M. (Lab. Carbocycles, Univ. Paris-Sud, Orsay, Fr.). Journal of Organometallic Chemistry, 90(1), C9-C12 (French) 1975. CODEN: JORCAI. ISSN: 0022-328X.

GI For diagram(s), see printed CA Issue.

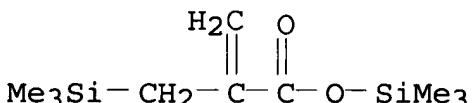
AB Flash thermolysis of trimethylsilyl esters of malonic acid and dimethylmalonic acid leads resp. to ketene and dimethylketene via their trimethylsilyl acetals. Thermolysis or flash thermolysis of trimethylsilyl cyclopropane-1,1-dicarboxylate leads to dimethyleneketene trimethylsilyl acetal (I) which undergoes interesting rearrangements involving 1,3-ttrimethylsilyl transfer from oxygen to carbon.

IT 56407-78-4P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

RN 56407-78-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, trimethylsilyl ester (9CI) (CA INDEX NAME)



CC 23-15 (Aliphatic Compounds)

Section cross-reference(s): 22, 24, 29

IT 463-51-4P 6004-44-0P 31580-84-4P 56407-78-4P

56407-79-5P 56407-80-8P 56407-82-0P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

L34 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN

1973:453482 Document No. 79:53482 Trialkyl(trialkylsilylacyloxy)stannates(IV). Voronkov, M. G.; Mirskov, R. G.; Ishchenko, O. S.; Korotaeva, I. M. (Irkutsk. Inst. Org. Khim., Irkutsk, USSR). Zhurnal Obshchei Khimii, 43(5), 1198-9 (Russian) 1973. CODEN: ZOKHA4. ISSN: 0044-460X.

AB Exchange between $\text{R}_3\text{SiO}_2\text{CCHR}_1\text{CH}_2\text{SiR}_3$ and R_2SnOH , R_2SnOR or $(\text{R}_2\text{Sn})_2\text{O}$ gave 90% $\text{R}_3\text{SiCH}_2\text{CHR}_1\text{CO}_2\text{SnR}_2\text{R}_3$ (I; $\text{R}_3 = \text{Et}_3, \text{Me}(\text{EtO})_2$; $\text{R}_1 = \text{H}, \text{Me}$; $\text{R}_2 = \text{Et}_3, \text{Me}_3, \text{Bu}_3$) and appropriately substituted R_3SiOX .

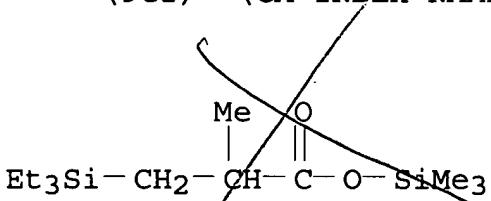
The starting materials were prep'd. from R₃SiH and R₃SiO₂CCR₁:CH₂. Similarly was prep'd. Bu₂Sn(O₂CCHMeCH₂SiEt₃)₂ (60-5%). The exchange was accomplished in several hrs at .apprx.100°.

IT 43123-27-9

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with triethylmethoxystannane)

RN 43123-27-9 HCPLUS

CN Propanoic acid, 2-methyl-3-(triethylsilyl)-, trimethylsilyl ester
(9CI) (CA INDEX NAME)



CC 29-8 (Organometallic and Organometalloidal Compounds)

IT 43123-27-9

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with triethylmethoxystannane)

L34 ANSWER 10 OF.10 HCPLUS COPYRIGHT 2006 ACS on STN

1967:76077 Document No. 66:76077 Synthesis of lactones and lactams with silicon atom in the ring. Mironov, V. F.; Fedotov, N. S. (Inst. Organosilicon Compds., Moscow, USSR). Khimiya Geterotsiklichesikh Soedinenii (3), 453-6 (Russian) 1966. CODEN: KGSSAQ. ISSN: 0132-6244.

GI For diagram(s), see printed CA Issue.

AB Methacrylic acid (51 g.) was added to a stirred mixt. of 70 g.

Me₃SiCl, 95 g. Et₂NH, and 500 ml. abs. Et₂O to give

Me₃SiOC(O)MeC:CH₂ (I); similarly were prep'd. Me₃SiOC(O)CH:CH₂ (II) and Me₃SiOC(O)CH₂CH:CH₂ (III) from acrylic acid and vinylacetic acid, resp. I (62 g.) was added during 2 hrs. to a boiling mixt. of 43 g. ClCH₂SiMe₂H and 1 ml. 0.1M soln. H₂PtCl₆ in iso-PrOH to yield Me₃SiOC(O)MeCHCH₂SiMe₂CH₂Cl (IV); similarly were prep'd.

Me₃SiOC(O)(CH₂)₃Me₂SiCH₂Cl (V) and Me₃SiOC(O)MeCHCH₂SiMe₂Et (VI) from II and ClCH₂Me₂SiH or I and Me₂EtSiH, resp. [TABLE OMITTED] A mixt. of IV (77 g.) and 50 ml. H₂O was stirred strongly at 60° for 2 hrs. to give ClCH₂SiMe₂CH₂MeCHCO₂H (VII); similarly were obtained EtMe₂SiCH₂MeCHCO₂H (VIII) and ClCH₂Me₂Si(CH₂)₃CO₂H (IX) from VI or V, resp., and H₂O. Anhyd. Na₂CO₃ (20 g.) was added to 40 g. VII and the mixt. heated at 100-20° for 1 hr. to yield X; similarly was prep'd. XI from IX and Na₂CO₃. A treatment of VII with SOCl₂ gave ClCH₂Me₂SiCH₂MeCHCOCl (XII); XII treated with NH₃ yielded ClCH₂Me₂SiCH₂MeCHCONH₂ (XIII). MeONa (8.2 g.) was added

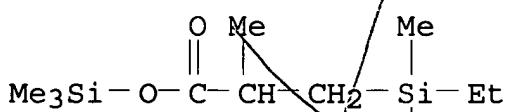
to 10 g. XIII in 50 ml. abs. MeOH, boiled for 1 hr. to give XIV. A treatment of IX with SOCl₂ gave ClCH₂MeSi(CH₂)₃COCl (XV). A reaction of XII with H₂O yielded (ClCH₂Me₂SiCH₂MeCHCO)₂O (XVI).

IT 13688-85-2P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prep. of)

RN 13688-85-2 HCPLUS

CN Propionic acid, 3-(ethyldimethylsilyl)-2-methyl-, trimethylsilyl ester (8CI) (CA INDEX NAME)



CC 29 (Organometallic and Organometalloidal Compounds)

IT 7803-62-5DP, Silane, carboxylalkyl and cyclic derivs. 13688-52-3P

13688-53-4P 13688-54-5P 13688-55-6P 13688-56-7P

13688-85-2P 13716-48-8P 13716-49-9P 13716-50-2P

13716-51-3P 13716-52-4P 13716-53-5P 13716-54-6P

13716-55-7P

13716-56-8P 13716-57-9P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prep. of)

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L51 ANSWER 1 OF 19 HCPLUS COPYRIGHT 2006 ACS on STN

2005:85311 Document No. 143:193990 Preparation of 5-substituted 7,9-difluoro-5h-chromeno[3,4-f]quinoline compounds as selective progesterone receptor modulators. Zhi, Lin; Van Oeveren, Cornelis Arjan; Pedram, Bijan; Karanewsky, Donald (Ligand Pharmaceuticals Incorporated, USA). Short-Term Pat. Specif. (Hong Kong) HK 1055059 A2 20031205, 108 pp. (English). CODEN: HKXXAR. APPLICATION: HK 20030804. PRIORITY: US 2002-2002/PV417968 20021011.

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* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

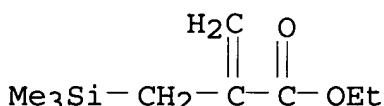
AB Title compds. I and II [wherein R1 = (un)substituted hetero/halo/alk(en/yn)yl, hetero/aryl; R2 = H, F, Cl, Br, I, (un)substituted hetero/halo/alk(en/yn)yl, hetero/aryl; and their pharmaceutically acceptable salts and prodrugs] were prep'd. as selective progesterone receptor modulators. Thus, reacting 7,9-difluoro-1,2-dihydro-2,2,4-trimethyl-5-coumarino[3,4-f]quinoline with 4-picollyllithium gave (Z)-II as a yellow solid. In a test for agonist activity at progesterone receptors expressed in CV-1 cells, (Z)-II had an efficacy (max. response) of 103% vs. progesterone, and an agonist potency (EC50) of 7.4 nM. It may suppress estrogen-induced endometrial stimulation in uterus equally efficacious as marketed steroid modulator compds. Three pharmaceutical compns. ar given.

IT **74976-84-4**

RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of difluorochromenoquinolines as selective progesterone receptor modulators)

RN 74976-84-4 HCPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
(CA INDEX NAME)



IC ICM C07D

ICS A61K

CC 28-2 (Heterocyclic Compounds (More Than One Hetero Atom))

Section cross-reference(s): 1, 63

IT 106-37-6, 1,4-Dibromobenzene 106-39-8, 4-Bromochlorobenzene
108-36-1, 1,3-Dibromobenzene 108-37-2, 3-Bromochlorobenzene
109-72-8, n-Butyllithium, reactions 401-78-5, 3-Bromobenzotrifluoride 591-17-3, 3-Bromotoluene 762-72-1,
Allyltrimethylsilane 1073-06-9, 3-Bromofluorobenzene 2599-82-8,
2-Fluorobenzyl 2635-13-4, 5-Bromo[1,3]benzodioxole 3757-88-8,
(Phenylethynyl)tributyltin 6165-68-0 6165-69-1,
Thiophen-3-ylboronic acid 13735-81-4, 1-Phenyl-1-[(trimethylsilyl)oxy]ethene 21369-64-2, n-Hexyl lithium
24850-33-7, (Propen-2-yl)tributyltin 26954-25-6, Picol-4-yllithium
38053-91-7, 2-[(Trimethylsilyl)oxy]-1,3-butadiene 38614-36-7,
2-Methyl-1-propenylmagnesium bromide 54663-78-4,
2-(Tributylstannyl)thiophene 54932-72-8, 5-Bromo-2-chlorotoluene
55499-73-5 64099-82-7, (1-Propynyl)tributyltin **74976-84-4**

98721-01-8, Ethyl 2-[2-[(trimethylsilyl)methyl]-2-propen-1-yl]acetate 107311-67-1, 5-Methyl-2-(tributylstannyl)thiophene 118486-94-5, 2-(Tributylstannyl)furan 118486-95-6, 5-Methyl-2-(tributylstannyl)furan 118486-97-8, N-Methyl-2-(tributylstannyl)pyrrole 148961-81-3, 2-(Tributylstannyl)benzo[b]furan 148961-88-0, 2-(Tributylstannyl)benzo[b]thiophene 153108-30-6, 2-Propynyltributyltin 352423-65-5, 5-Methoxy-2-(tributylstannyl)furan 457644-72-3, [3-(Dimethylamino)phenyl]tributyltin 861926-09-2, 7,9-Difluoro-1,2-dihydro-2,2,4-trimethyl-5-coumarino[3,4-f]quinoline 861926-18-3 861926-21-8 861926-74-1, 2,3-Dimethyl-5-(tributylstannyl)furan 861926-77-4, 3,4-Dimethyl-2-(tributylstannyl)thiophene

RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. of difluorochromenoquinolines as selective progesterone receptor modulators)

L51 ANSWER 2 OF 19 HCPLUS COPYRIGHT 2006 ACS on STN
 2002:255783 Document No. 137:278737 Amination of α,β -unsaturated (2-trimethylsilyl methyl) carboxylic esters. Gasperi, Tecla; Antonietta Loreto, M.; Tardella, Paolo A.; Gambacorta, Augusto (Dipartimento di Chimica, Universita 'La Sapienza', Rome, I-00185, Italy). Tetrahedron Letters, 43(16), 3017-3020 (English) 2002. CODEN: TELEAY. ISSN: 0040-4039. OTHER SOURCES: CASREACT 137:278737. Publisher: Elsevier Science Ltd..

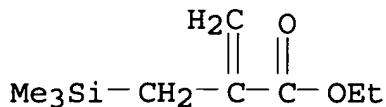
AB The reactions of (2-trimethylsilyl methyl) α,β -unsatd. carboxylic Et esters with $\text{NsONHCO}_2\text{Et}$ and CaO produce, after treatment with AcOH , α -methylene N -(ethoxycarbonyl) β -amino carboxylic esters through ring opening and elimination of the trimethylsilyl group from the intermediate aziridine. By ozonization and subsequent reductive cleavage these products give the corresponding N -(ethoxycarbonyl) β -amino α -hydroxy esters.

IT 74976-84-4

RL: RCT (Reactant); RACT (Reactant or reagent)
 (amination of α,β -unsatd. (trimethylsilyl methyl) carboxylic esters)

RN 74976-84-4 HCPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
 (CA INDEX NAME)



CC 21-2 (General Organic Chemistry)
 IT 2955-74-0 **74976-84-4** 80361-24-6 159531-03-0
 464918-39-6

RL: RCT (Reactant); RACT (Reactant or reagent)
 (amination of α,β -unsatd. (trimethylsilyl)methyl)
 carboxylic esters)

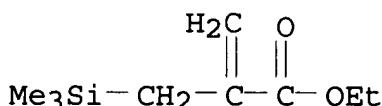
L51 ANSWER 3 OF 19 HCAPLUS COPYRIGHT 2006 ACS on STN
 2002:124477 Document No. 137:20143 One-pot, three-component synthesis
 of open-chain, polyfunctional sulfones. Bouchez, Laure; Vogel,
 Pierre (Institut de chimie moléculaire et biologique de l'Ecole
 Polytechnique Federle de Lausanne, Switz.). Synthesis (2), 225-231
 (English) 2002. CODEN: SYNTBF. ISSN: 0039-7881. OTHER SOURCES:
 CASREACT 137:20143. Publisher: Georg Thieme Verlag.

AB Silyl enol ethers of esters, ketones, as well as allylstannane and
 allylsilanes react with sulfur dioxide activated with
 $\text{Me}_3\text{CMe}_2\text{SiO}_3\text{SCF}_3$ to give silyl sulfinate that can be reacted in the
 same pot with a variety of electrophiles generating the
 corresponding polyfunctional sulfones. The silyl sulfinate
 intermediates are formed via ene-reactions following probably
 concerted mechanisms.

IT **74976-84-4**
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (one-pot, three-component synthesis of open-chain, polyfunctional
 sulfones)

RN 74976-84-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
 (CA INDEX NAME)



CC 23-11 (Aliphatic Compounds)

IT 105-36-2 762-72-1, Allyltrimethylsilane 816-40-0 1453-98-6
 1833-53-0, 2-Trimethylsilyloxypropene 7446-09-5, Sulfur dioxide,
 reactions 18292-38-1, Methallyltrimethylsilane 24850-33-7,

Allyltributylstannane 34880-70-1 **74976-84-4**

115095-37-9 433925-12-3

RL: RCT (Reactant); RACT (Reactant or reagent)

(one-pot, three-component synthesis of open-chain, polyfunctional sulfones)

L51 ANSWER 4 OF 19 HCPLUS COPYRIGHT 2006 ACS on STN

2000:431276 Document No. 133:164114 Pummerer-type α -functionalization of arylselenenyl acetates by treating with trimethylsilyl- or tri-n-butylstannyl-masked nucleophiles and trifluoroacetic anhydride or a Lewis acid. Shimada, Kazuaki; Kikuta, Yutaka; Koganebuchi, Hiroyuki; Yonezawa, Fumi; Aoyagi, Shigenobu; Takikawa, Yuji (Department of Applied Chemistry and Molecular Science, Faculty of Engineering, Iwate University, Iwate, 020-8551, Japan). Tetrahedron Letters, 41(23), 4637-4640 (English) 2000. CODEN: TELEAY. ISSN: 0040-4039. OTHER SOURCES: CASREACT 133:164114. Publisher: Elsevier Science Ltd..

AB Arylselenenylacetates underwent facile α -functionalization on treatment with trimethylsilyl- or tri-n-butylstannyl-masked nucleophiles and trifluoroacetic anhydride (TFAA) or a Lewis acid. Thus, reaction of $\text{ROCOCH}_2\text{Se}(\text{O})\text{Ph}$ with allyltrimethylsilane in the presence of $(\text{CF}_3\text{CO})_2\text{O}$ in CH_2Cl_2 gave 42% $\text{ROCOCH}(\text{SePh})\text{CH}_2\text{CH}:\text{CH}_2$ ($\text{R} = \text{l-methyloxy}$).

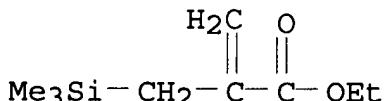
IT **74976-84-4**, [2-(Ethoxycarbonyl)allyl]trimethylsilane

RL: RCT (Reactant); RACT (Reactant or reagent)

(Pummerer-type alpha-functionalization of arylselenenyl acetates by treating with trimethylsilyl- or tributylstannyl-masked nucleophiles and trifluoroacetic anhydride or Lewis acid)

RN 74976-84-4 HCPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
(CA INDEX NAME)



CC 29-8 (Organometallic and Organometalloidal Compounds)

Section cross-reference(s): 21, 30, 31

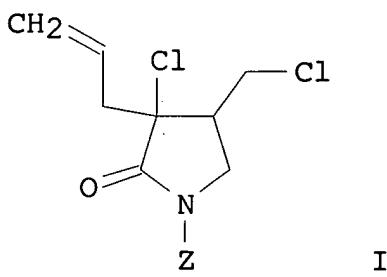
IT 109-63-7, Boron trifluoride etherate 407-25-0, Trifluoroacetic anhydride 762-72-1 4648-54-8, Trimethylsilyl azide 24850-33-7, Allyltributylstannane **74976-84-4**, [2-(Ethoxycarbonyl)allyl]trimethylsilane

RL: RCT (Reactant); RACT (Reactant or reagent)

(Pummerer-type alpha-functionalization of arylselenenyl acetates by treating with trimethylsilyl- or tributylstannyln-masked nucleophiles and trifluoroacetic anhydride or Lewis acid)

L51 ANSWER 5 OF 19 HCAPLUS COPYRIGHT 2006 ACS on STN
 2000:124080 Document No. 133:17350 Stereochemistry of
 α -alkyl- α,γ -dichloro- γ -lactams. Iwamatsu,
 Shoichi; Matsubara, Kouki; Kondo, Hideo; Nagashima, Hideo (Grad.
 Sch. of Eng. Sci., and Inst. of Adv. Mater. Stud., Kyushu Univ.,
 Japan). Kyushu Daigaku Chuo Bunseki Senta Hokoku, Volume Date 1999,
 17, 13-20 (Japanese) 2000. CODEN: KDCHEW. ISSN: 0916-0892. OTHER
 SOURCES: CASREACT 133:17350. Publisher: Kyushu Daigaku Chuo Bunseki
 Senta.

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AB The addn. reactions of α,α,γ -trichlorinated γ lactams to olefins proceeded at 40-83° in the presence of catalytic amts. of CuCl (2,2'-bipyridine). Reactions of N-tosyl or N-benzyl-3,3-dichloro-4-(chloromethyl)pyrrolidin-2-one with allyltrimethylsilane followed by treatment with silica gel afforded α -allyl- α,γ -lactams (I; Z = p-toluenesulfonyl, CH₂Ph) of which diastereomer ratios were 9:1-8:2. Although detn. of their stereochem. by NMR spectroscopy was problematic, crystallog. anal. revealed that stereochem. of the major isomer was the cis-form, which was thermodynamically more stable than the trans-form.

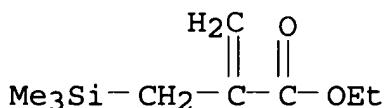
IT 74976-84-4

RL: RCT (Reactant); RACT (Reactant or reagent)
 (prepn. of α -alkyl- α,γ -dichloro- γ -lactams
 by addn. reactions of 3,3-dichloro-4-(chloromethyl)pyrrolidin-2-one derivs. with olefins)

RN 74976-84-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)

(CA INDEX NAME)



CC 27-10 (Heterocyclic Compounds (One Hetero Atom))
 IT 115-11-7, 2-Methylpropylene, reactions 513-81-5,
 2,3-Dimethyl-1,3-butadiene 592-41-6, 1-Hexene, reactions
 1192-37-6, Methylenecyclohexane **74976-84-4** 91989-84-3
 145593-46-0
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (prep. of α -alkyl- α,γ -dichloro- γ -lactams
 by addn. reactions of 3,3-dichloro-4-(chloromethyl)pyrrolidin-2-one
 derivs. with olefins)

L51 ANSWER 6 OF 19 HCPLUS COPYRIGHT 2006 ACS on STN
 1999:487121 Document No. 131:144983 Free-radical chain transfer
 polymerization process. Rizzato, Ezio; Meijis, Gordon Francis;
 Thang, San Hoa (Commonwealth Scientific and Industrial Research
 Organisation, Australia). U.S. US 5932675 A 19990803, 23 pp.
 (English). CODEN: USXXAM. APPLICATION: US 1997-823299 19970321.
 PRIORITY: US 1989-372357 19890605; US 1991-731393 19910717; US
 1993-72687 19930607; US 1994-325496 19941019; US 1995-478515
 19950607.

AB A process for the prodn. of lower mol. wt. polymers by free-radical
 polymn. uses $\text{CH}_2=\text{C}[\text{CH}_2\text{X}(\text{R}_2)\text{n}]\text{R}_1$ as alternatives to thiols or other
 chain transfer agents for the control of mol. wt., where R_1 is a
 group capable of activating vinylic carbon toward free radical
 addn., exclusive of hydrogen, R_2 is alkyl, alkenyl, alkynyl, or a
 satd, unsatd. or arom. carbocyclic or heterocyclic ring, optionally
 contg. hydroxy, amino, halogen, phosphonate, trialkylsilyl, cyano,
 epoxy, carboxylic acid, carboxylic acid ester, allyl or alkyl
 substituents, X is S, Si, Se, P, Br, Cl, Sn, phosphonate, sulfoxide
 sulfone or phosphine oxide, and n is 0-3, such that the valency of X
 is satisfied and, when $n > 1$, R_2 is identical or different. Thus, Me
 methacrylate contg. azobisisobutyronitrile and α -(tert-
 butanethiomethyl)styrene (I) was polymd. for 1 h at 60° in
 the absence of oxygen. The chain transfer const. calcd. for I was
 1.24, indicating that I was an efficient chain transfer agent and
 produced poly(Me methacrylate) of low mol. wt. in a controlled
 manner.

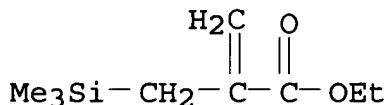
IT **74976-84-4P**

RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(chain-transfer agent; for mol. wt. control in free-radical polymn. of vinyl compds.)

RN 74976-84-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI) (CA INDEX NAME)



IC ICM C08F002-38

INCL 526289000

CC 35-4 (Chemistry of Synthetic High Polymers)

IT 25150-08-7P 25186-51-0P 51876-00-7P 51876-03-0P 60154-85-0P,
 ~~α - (2-Hydroxyethylthiomethyl)styrene 74976-84-4P~~
~~89295-32-9P, Ethyl α - (benzenesulfonylmethyl)acrylate~~
~~92822-43-0P 108286-71-1P 116233-34-2P, α - (tert-Butylthiomethyl)styrene 116233-35-3P 118729-71-8P 118729-73-0P~~
~~118769-89-4P 118769-92-9P 118769-96-3P 118769-99-6P~~
~~118770-08-4P 118770-23-3P 118770-39-1P, α -Benzyl oxyacrylonitrile 118770-44-8P, Methyl α -benzyl oxyacrylate 118770-49-3P, α -Benzyl oxyacrylamide~~
~~118770-56-2P, α - (4-Methoxycarbonylbenzyl oxy) styrene~~
~~118770-59-5P 118770-64-2P, α - (4-Cyanobenzyl oxy) styrene~~
~~118770-67-5P 118770-70-0P 118770-72-2P, α -Benzyl oxy [4-chloromethyl)styrene] 118770-74-4P 118770-76-6P 118770-80-2P~~
~~118770-83-5P 118770-85-7P 118770-87-9P 118770-90-4P~~
~~118770-92-6P 118770-95-9P 118770-97-1P 118770-99-3P~~
~~118992-87-3P~~

RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(chain-transfer agent; for mol. wt. control in free-radical polymn. of vinyl compds.)

L51 ANSWER 7 OF 19 HCAPLUS COPYRIGHT 2006 ACS on STN

1999:118488 Document No. 130:252209 Copper-catalyzed facile carbon-carbon bond forming reactions at the α -position of α,α,γ -trichlorinated γ -lactams. Iwamatsu, Sho-Ichi; Kondo, Hideo; Matsubara, Kouki; Nagashima, Hideo (Department of Molecular Science and Technology, Graduate School of Engineering Sciences, Kyushu University, Fukuoka, 816-8580, Japan).

Tetrahedron, 55(6), 1687-1706 (English) 1999. CODEN: TETRAB. ISSN: 0040-4020. OTHER SOURCES: CASREACT 130:252209. Publisher: Elsevier Science Ltd..

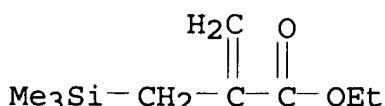
AB Treatment of α,α,γ -trichlorinated γ -lactams with a catalytic amt. of CuCl(bipyridine) complex resulted in facile activation of their carbon-chlorine bond at the α -position. Addn. of the carbon moiety and the chlorine atom to olefins furnished the carbon-carbon bond forming reaction at the α -position of the carbonyl group. In certain trichlorinated γ -lactams including a carbon-carbon double bond at an appropriate position, intramol. addn. reactions took place to give bicyclic lactams. Sequential reactions consisting of the cyclization of N-allyl trichloroacetamides followed by the inter- or intramol. carbon-carbon bond forming reactions at the α -position of the lactams were also achieved. Efficiency of the catalyst and reaction rate was dependent on the protecting group of the nitrogen atom of the γ -lactams; N-tosyl derivs. gave better results than the corresponding N-benzyl homologs. The mol. structure of the representative products revealed the stereochem. outcome of the reactions.

IT 74976-84-4

RL: RCT (Reactant); RACT (Reactant or reagent)
(copper-catalyzed facile carbon-carbon bond forming reactions at the α -position of α,α,γ -trichlorinated γ -lactams)

RN 74976-84-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
(CA INDEX NAME)



CC 27-10 (Heterocyclic Compounds (One Hetero Atom))

IT 115-11-7, 2-Methylpropene, reactions 513-81-5,

2,3-Dimethyl-1,3-butadiene 592-41-6, 1-Hexene, reactions
762-72-1, Allyltrimethylsilane 1192-37-6, Methylenecyclohexane

74976-84-4 91989-79-6 145610-58-8 221450-43-7
221450-44-8

RL: RCT (Reactant); RACT (Reactant or reagent)
(copper-catalyzed facile carbon-carbon bond forming reactions at the α -position of α,α,γ -trichlorinated γ -lactams)

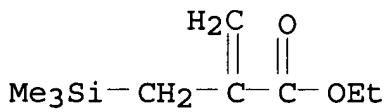
L51 ANSWER 8 OF 19 HCPLUS COPYRIGHT 2006 ACS on STN
 1997:41864 Document No. 126:60291 Saccharopeptides and derivatives thereof. Fugedi, Peter; Peto, Csaba F.; Holme, Kevin R.; Wang, Li (Glycomed Incorporated, USA). PCT Int. Appl. WO 9635700 A1 19961114, 198 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-US6731 19960510. PRIORITY: US 1995-438669 19950510.

AB Glycomimetic saccharopeptides W-(X)n-Y-[(X)n-W-(X)n-Y]m-(X)n-W [W = saccharide residue, aryl, aralkyl, alkyl or substituted alkyl, cycloalkyl, heterocyclic alkyl; X = aryl, aralkyl, alkyl or substituted alkyl, Y = NRCO or CONR, where R = H, alkyl, aralkyl; n = 0, 1; m = 0-99] and their pharmaceutically acceptable salts were prep'd. Thus, N-(β -D-glucopyran-1-osyl uronic acid)-1-azido-1-deoxy- β -D-glucopyranuronamide was prep'd. from Me (2,3,4-tri-O-acetyl- β -D-glucopyranosyl amine)uronate and 2,3,4-tri-O-acetyl-1-azido-1-deoxy- β -D-glucopyranuronic acid. The product inhibited binding to selectin receptors E, L, and P (IC₅₀ = >1.0, 2.6, and 0.3 mM, resp.).

IT 74976-84-4, 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (prepn. of saccharopeptides and their derivs.)

RN 74976-84-4 HCPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
 (CA INDEX NAME)



IC ICM C07H015-00
 ICS A61K031-70

CC 33-8 (Carbohydrates)
 Section cross-reference(s): 1, 34, 63

IT 66-84-2, D-Glucosamine hydrochloride 96-35-5, Methyl glycolate 110-15-6, Butanedioic acid, reactions 124-04-9, Hexanedioic acid, reactions 503-49-1, 3-Hydroxy-3-methylglutaric acid 572-09-8, Acetobromo glucose 582-52-5 619-45-4, Methyl 4-aminobenzoate

1109-28-0, Maltotriose 1824-94-8, Methyl β -D-galactopyranoside 3616-19-1, Celllobiose octaacetate 4704-15-8
 9004-74-4 9005-49-6, Heparin, reactions 9013-15-4, Colominic acid 13992-25-1 20880-60-8, Maltose octaacetate 35737-10-1
 58632-95-4, Boc-on 74976-84-4, 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester 76821-26-6, Maltotriose undecaacetate 145987-57-1 150256-42-1 185116-42-1
 185116-43-2

RL: RCT (Reactant); RACT (Reactant or reagent)
 (prep. of saccharopeptides and their derivs.)

L51 ANSWER 9 OF 19 HCAPLUS COPYRIGHT 2006 ACS on STN

1991:82601 Document No. 114:82601 Chain transfer activity of some activated allylic compounds. Meijer, Gordon F.; Rizzato, Ezio; Thang, San H. (Div. Chem. Polym., CSIRO, Clayton, 3168, Australia). Polymer Bulletin (Berlin, Germany), 24(5), 501-5 (English) 1990.
 CODEN: POBUDR. ISSN: 0170-0839.

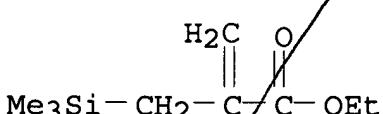
AB Various olefins that were activated towards radical addn. and contained a homolytic leaving group in the allylic position were effective chain-transfer agents in radical polymers. of Me (meth)acrylate, styrene, and vinyl acetate. These allylic compds. included bromides, phosphonates, stannanes, thioethers, sulfoxides, and sulfones. Allylic silanes and chlorides, however, did not possess significant chain-transfer activity. Suitable activating substituents towards radical addn. were Ph, EtOCO, CN, and Aco. Several of the compds. had an advantage over thiols in that they did not contain S.

IT 74976-84-4

RL: USES (Uses)
 (chain-transfer agents, for Me methacrylate polymn.)

RN 74976-84-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
 (CA INDEX NAME)



CC 35-3 (Chemistry of Synthetic High Polymers)

IT 106-95-6, 3-Bromo-1-propene, uses and miscellaneous

74976-84-4 108286-71-1

RL: USES (Uses)

(chain-transfer agents, for Me methacrylate polymn.)

L51 ANSWER 10 OF 19 HCAPLUS COPYRIGHT 2006 ACS on STN
 1990:118928 Document No. 112:118928 The cerium(III)-mediated reaction of (trimethylsilyl)methylmagnesium chloride with esters and lactones: the efficient synthesis of some functionalized allylsilanes of use in annulation reactions. Lee, Thomas V.; Channon, Julia A.; Clegg, Carmel; Porter, John R.; Roden, Frances S.; Yeoh, Helena T. L. (Sch. Chem., Univ. Bristol, Bristol, BS8 1TS, UK). Tetrahedron, 45(18), 5877-86 (English) 1989. CODEN: TETRAB. ISSN: 0040-4020. OTHER SOURCES: CASREACT 112:118928.

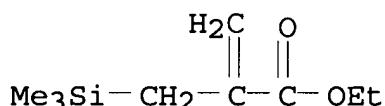
AB The use of cerium(III) chloride alters the chemoselectivity of the reaction of $\text{Me}_3\text{SiCH}_2\text{MgCl}$ with ester-acetals, e.g., $(\text{MeO})_2\text{CHCH}_2\text{CO}_2\text{Me}$, and also greatly improves the efficiency of reaction with lactones. In addn. it gives improved preps. of useful intermediates, e.g., $\text{ClCH}_2\text{C}(:\text{CH}_2)\text{CH}_2\text{SiMe}_3$ and gives direct access to valuable functionalized allylsilanes, e.g. $(\text{MeO})_2\text{CHC}(:\text{CH}_2)\text{CH}_2\text{SiMe}_3$ of use in annulation reactions.

IT **74976-84-4P**

RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

RN 74976-84-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
 (CA INDEX NAME)



CC 29-6 (Organometallic and Organometalloidal Compounds)

IT 18388-03-9P 56407-82-0P 59627-56-4P **74976-84-4P**
 81302-80-9P 99667-09-1P 102234-84-4P 105941-69-3P
 108264-16-0P 116279-69-7P 116760-31-7P 121896-54-6P
 121896-55-7P 125564-74-1P 125564-75-2P 125564-76-3P
 125564-77-4P

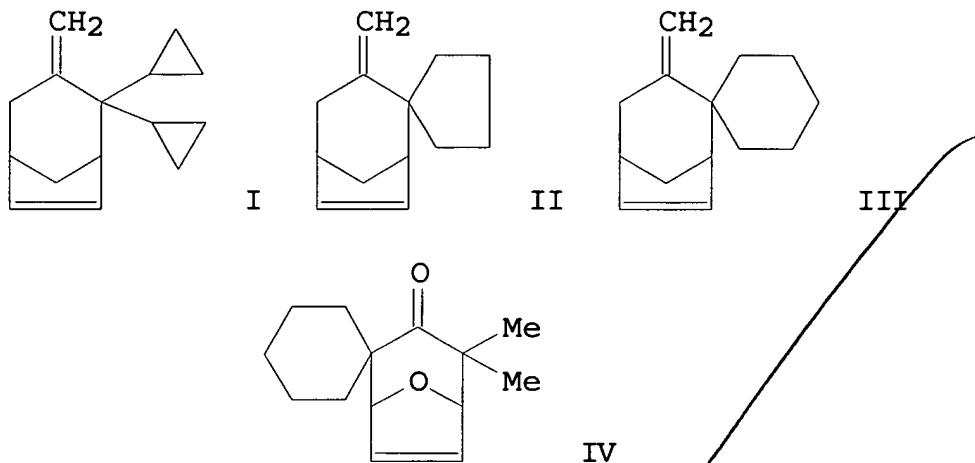
RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

L51 ANSWER 11 OF 19 HCAPLUS COPYRIGHT 2006 ACS on STN

1989:497538 Document No. 111:97538 Nucleophilic organosilicon intermediates turned electrophilic: (Trimethylsilyl)methyl, trimethylsiloxy and also 2-tetrahydropyranoyloxy as terminators of cycloadditions of allyl cations. A short route to dehydrozizaenes (6-methylenetricyclo[6.2.1.01,5]undec-9,10-enes) and related

tricycles and [3.2.1]-bicycles. Hoffmann, H. M. R.; Eggert, Ulrike; Gibbels, Uwe; Giesel, Kunibert; Koch, Oskar; Lies, Reinhard; Rabe, Juergen (Dep. Org. Chem., Univ. Hannover, Hannover, D-3000, Fed. Rep. Ger.). *Tetrahedron*, 44(13), 3899-918 (English) 1988. CODEN: TETRAB. ISSN: 0040-4020. OTHER SOURCES: CASREACT 111:97538.

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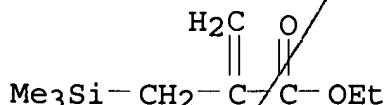
AB A range of suitable precursors were prep'd. in order to contrast and use Me_3SiCH_2 -, Me_3SiO - and THPO-groups as terminators in both inter- and intramol. cycloaddns. of allyl cations to cyclic 1,3-dienes. A variety of crowded bicyclic, tricyclic, and spirofused adducts with [3.2.1]skeletons were obtained. The compds., e.g. I-IV, are of interest, e.g., in perfumery. The work contributes to the development of carbocation-induced cyclization methodol.

IT 74976-84-4

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with bis-Grignards)

RN 74976-84-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
(CA INDEX NAME)



CC 30-15 (Terpenes and Terpenoids)
 IT 31333-41-2 **74976-84-4** 94018-19-6 104281-79-0
 104281-80-3 122166-34-1 122166-35-2 122166-36-3 122166-37-4
 122166-38-5 122166-39-6 122166-40-9 122166-41-0 122166-42-1
 122166-43-2 122166-44-3 122166-46-5 122166-47-6 122166-48-7
 122166-49-8 122166-65-8 122211-49-8 122211-53-4 122211-54-5
 122211-55-6 143603-08-1

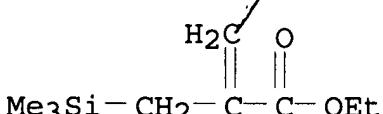
RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with bis-Grignards)

L51 ANSWER 12 OF 19 HCPLUS COPYRIGHT 2006 ACS on STN
 1989:94110 Document No. 110:94110 Reactivity of the organozinc
 derivative of ethyl α -(bromomethyl)acrylate. El Alami, N.;
 Belaud, C.; Villieras, J. (Lab. Synth. Org. Select. Mater., Fac.
 Sci. Tech., Nantes, F-44072, Fr.). Journal of Organometallic
 Chemistry, 353(2), 157-68 (French) 1988. CODEN: JORCAI. ISSN:
 0022-328X. OTHER SOURCES: CASREACT 110:94110.

AB BrZnCH₂C(:CH₂)CO₂Et (I) is not nucleophilic towards haloalkanes but
 can be alkylated with chlorotrimethylsilane. I is unreactive
 towards carbon-oxygen single bonds and is unsuitable for conjugate
 addn. (α -enones and α,β -ethylenic esters). Its
 acylation can be carried out in DME in the presence of palladium(0)
 catalyst. Reactions with carbon-oxygen and carbon-nitrogen double
 bonds permit the prepn. of α -methylene γ -butyrolactones
 and lactams without the formation of side-products. This route is
 esp. suitable for reactions with substrates such as imines that are
 both nucleophilic and electrophilic.

IT **74976-84-4P**
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prep. of)

RN 74976-84-4 HCPLUS
 CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
 (CA INDEX NAME)



CC 21-2 (General Organic Chemistry)
 Section cross-reference(s): 29

IT 20593-63-9P 26613-71-8P 58557-31-6P 58557-32-7P 69504-61-6P
 71741-47-4P **74976-84-4P** 105125-05-1P 105125-09-5P
 108349-24-2P 108833-84-7P 108833-85-8P 109954-52-1P

109954-57-6P 119135-69-2P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

L51 ANSWER 13 OF 19 HCAPLUS COPYRIGHT 2006 ACS on STN
 1989:23313 Document No. 110:23313 High yield synthesis of
 α -propargylic acrylic ester: a general access to
 α -substituted acrylic esters. Queignec, Rene; Kirschleger,
 Bernard; Lambért, Francois; Aboutaj, Mohammed (CNRS, Fac. Sci.,
 Nantes, F-44072, Fr.). Synthetic Communications, 18(11), 1213-23
 (English) 1988. CODEN: SYNCBV. ISSN: 0039-7911. OTHER SOURCES:
 CASREACT 110:23313.

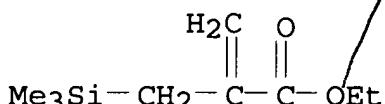
AB Acrylates CH₂:CR₁CO₂Et (R₁ = propargyl, allyl, crotyl, methallyl,
 ClCH:CHCH₂, PhCH₂, cinnamyl, C₆H₁₃) were prepd. from PhCOCH₂CO₂Et,
 R₁X (X = Br, Cl), and HCHO. The reaction of PhCOCH₂CO₂Et with R₁X,
 K₂CO₃, and NaI gave PhCOCHR₁CO₂Et, and the latter were treated with
 HCHO and K₂CO₃ to give CH₂:CR₁CO₂Et.

IT 74976-84-4P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

RN 74976-84-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
 (CA INDEX NAME)



CC 23-17 (Aliphatic Compounds)

IT 2409-52-1P 3618-41-5P 20593-63-9P 54109-49-8P 54109-50-1P

54109-54-5P 74976-84-4P 106434-67-7P 110481-60-2P

118067-04-2P 118067-05-3P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

L51 ANSWER 14 OF 19 HCAPLUS COPYRIGHT 2006 ACS on STN

1987:554393 Document No. 107:154393 Heterogeneous mediated alkylation
 of ethyl diethylphosphonoacetate. A one pot access to
 α -alkylated acrylic esters. Kirschleger, Bernard; Queignec,
 Rene (Fac. Sci., Nantes, F-44072, Fr.). Synthesis (11), 926-8
 (English) 1986. CODEN: SYNTBF. ISSN: 0039-7881. OTHER SOURCES:
 CASREACT 107:154393.

AB Alkylation of (EtO)₂P(O)CH₂CO₂Et with RX (R = allyl, propargyl, Bu,

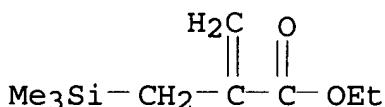
n-heptyl, X = Br; R = crotyl, H₂C:CH₂CH₂, Me₃SiCH₂, PhCH₂, ClCH:CHCH₂; X = Cl) over K₂CO₃-NaI gave 60-78% (EtO)₂P(O)CHRCO₂Et, olefination of which, with H₂CO in H₂O in the presence of K₂CO₃, gave 48-80% H₂C:CRCO₂Et.

IT 74976-84-4P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and spectra of)

RN 74976-84-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
(CA INDEX NAME)

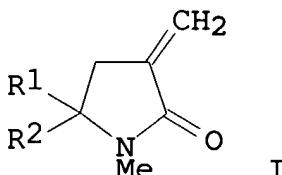


CC 29-7 (Organometallic and Organometalloidal Compounds)
Section cross-reference(s): 23

IT 3618-37-9P 20593-63-9P 54109-49-8P 54109-50-1P
74976-84-4P 81143-90-0P 106434-67-7P 110481-60-2P
RL: PRP (Properties); SPN (Synthetic preparation); PREP
(Preparation)
(prepn. and spectra of)

L51 ANSWER 15 OF 19 HCAPLUS COPYRIGHT 2006 ACS on STN
1987:423193 Document No. 107:23193 Isolation of the Reformatskii
reagent from ethyl α -(bromomethyl)acrylate. Alami, N. E.;
Belaud, C.; Villieras, J. (Lab. Synth. Org. Select., Fac. Sci.,
Nantes, F 44072, Fr.). Tetrahedron Letters, 28(1), 59-60 (French)
1987. CODEN: TELEAY. ISSN: 0040-4039. OTHER SOURCES: CASREACT
107:23193.

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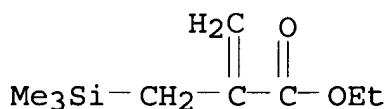


AB The Reformatskii reaction of BrCH₂C(:CH₂)CO₂Et with R₁CR₂:NMe (R₁ = aryl, R₂ = H or aryl) gave pyrrolidinones I in yields of ≥ 75%. Reaction of BrZnCH₂C(:CH₂)CO₂Et with Me₃SiCl gave Me₃SiCH₂C(:CH₂)CO₂Et.

IT **74976-84-4P**

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 74976-84-4 HCPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
(CA INDEX NAME)

CC 27-10 (Heterocyclic Compounds (One Hetero Atom))
Section cross-reference(s): 23, 25

IT **74976-84-4P** 105125-09-5P 108833-84-7P 108833-85-8P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of) ~~X~~

L51 ANSWER 16 OF 19 HCPLUS COPYRIGHT 2006 ACS on STN
1986:88654 Document No. 104:88654 A simple synthesis of
(2-ethoxycarbonylallyl)trimethylsilane, a potential synthon for the
synthesis of 2-methylene-4-alkanolides. Haider, Akhtar (Inst. Chim.
Org., Univ. Lausanne, Lausanne, CH-1005, Switz.). Synthesis (3),
271-2 (English) 1985. CODEN: SYNTBF. ISSN: 0039-7881. OTHER
SOURCES: CASREACT 104:88654.

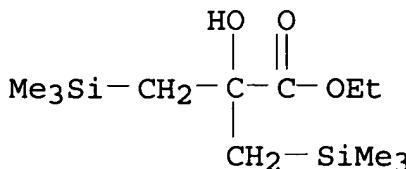
AB Grignard reaction of Me₃SiCH₂MgCl with EtO₂CCOCl gave 53%
Me₃SiCH₂C(:CH₂)CO₂Et. ✓

IT **100548-24-1P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)
(prepn. and elimination reactions of)

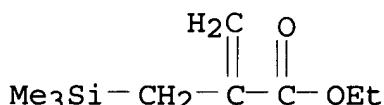
RN 100548-24-1 HCPLUS

CN Propanoic acid, 2-hydroxy-3-[(trimethylsilyl)methyl]-, ethyl ester (9CI) (CA INDEX NAME)

IT **74976-84-4P**

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and spectra of)

RN 74976-84-4 HCPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
 (CA INDEX NAME)

CC 29-6 (Organometallic and Organometalloidal Compounds)

IT **100548-24-1P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
 RACT (Reactant or reagent)
 (prepn. and elimination reactions of)

IT **74976-84-4P**

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and spectra of)

L51 ANSWER 17 OF 19 HCPLUS COPYRIGHT 2006 ACS on STN

1983:159956 Document No. 98:159956 Palladium-mediated cycloaddition approach to cyclopentanoids. Mechanistic studies. Trost, Barry M.; Chan, Dominic M. T. (Dep. Chem., Univ. Wisconsin, Madison, WI, 53706, USA). Journal of the American Chemical Society, 105(8), 2326-35 (English) 1983. CODEN: JACSAT. ISSN: 0002-7863. OTHER SOURCES: CASREACT 98:159956.

AB The reactive intermediate in the Pd-catalyzed cycloaddn. of $\text{Me}_3\text{SiCH}_2\text{C}(\text{CH}_2\text{OAc})\text{:CH}_2$ with electron-deficient olefins is probed. The initial formation of an electrophilic π -allylpalladium cationic complex is verified by alkylation studies. Desilylation then provides the nucleophilic species responsible for (1) cycloaddn., (2) aldehyde addn., and (3) desilylative alkylation.

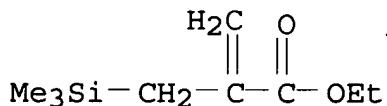
D-labeling studies verify that an unsym. species that can equilibrate all 3 methylene groups is responsible. The intervention of a (η^3 -trimethylenemethane)palladium complex accommodates all the exptl. observations. Some comments are offered to understand the differing results obtained herein compared to the cooligomerization of alkylidene cyclopropanes.

IT **74976-84-4P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reductive deuteration of)

RN 74976-84-4 HCPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
(CA INDEX NAME)



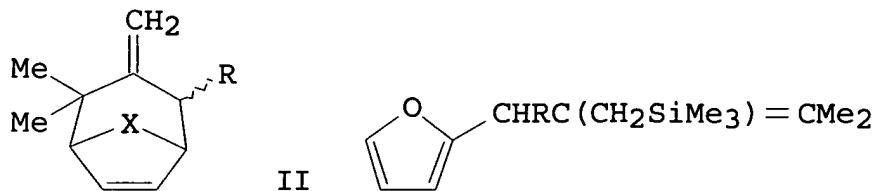
CC 22-5 (Physical Organic Chemistry)
Section cross-reference(s): 67

IT **74976-84-4P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reductive deuteration of)

L51 ANSWER 18 OF 19 HCPLUS COPYRIGHT 2006 ACS on STN
1982:545025 Document No. 97:145025 Cycloadditions of allyl cations.
Part 30. A novel approach to complex terpenoid
methylenecyclohexanes. Henning, Rolf; Hoffmann, H. M. R. (Dep.
Chem., Univ. Hannover, Hannover, D-3000, Fed. Rep. Ger.).
Tetrahedron Letters, 23(22), 2305-8 (English) 1982. CODEN: TELEAY.
ISSN: 0040-4039. OTHER SOURCES: CASREACT 97:145025.

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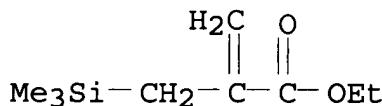
AB Trifluoroacetylation of $\text{RCH:C(CH}_2\text{SiMe}_3\text{)CMe}_2\text{OH}$ ($\text{R} = \text{H, Me}$), prep'd. in 5 steps from $(\text{EtO})_2\text{P(O)CH}_2\text{CO}_2\text{Et}$, by $(\text{F}_3\text{CCO})_2\text{O/EtN(CHMe}_2)_2$ in CH_2Cl_2 at -70 to -30° gave $\text{RCH:C(CH}_2\text{SiMe}_3\text{)CMe}_2\text{O}_2\text{CCF}_3$ (I; R as before) which were activated towards cycloaddn. reactions with cyclopentadiene and furan. Cycloaddn., reaction of I ($\text{R} = \text{H, Me}$) with cyclopentadiene in MeCN in the presence of ZnCl_2 at 0° gave the corresponding cycloadducts II ($\text{X} = \text{CH}_2$) in 45 and 60% yield, resp., together with a small amt. of (E)- $\text{RCH:C(CH}_2\text{SiMe}_3\text{)CMe:CH}_2$ (III). Similar treatment of I ($\text{R} = \text{H}$) with furan gave a 1:6:3 mixt. of III ($\text{R} = \text{H}$), furan IV ($\text{R} = \text{H}$), and II ($\text{X} = \text{O}; \text{R} = \text{H}$). I ($\text{R} = \text{Me}$) reacted with furan to give a 1:2:1 mixt. of III, IV ($\text{R} = \text{Me}$), and II ($\text{X} = \text{O}, \text{R} = \text{Me}$), resp.

IT **74976-84-4P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and methylation of)

RN 74976-84-4 HCPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
(CA INDEX NAME)



CC 30-1 (Terpenes and Terpenoids)

Section cross-reference(s): 24, 27

IT **74976-84-4P 80361-24-6P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and methylation of)

L51 ANSWER 19 OF 19 HCPLUS COPYRIGHT 2006 ACS on STN
1980:568400 Document No. 93:168400 Nature of a trimethylenemethane-

palladium complex. Trost, Barry M.; Chan, Dominic M. T. (Dep. Chem., Univ. Wisconsin, Madison, WI, 53706, USA). Journal of the American Chemical Society, 102(20), 6359-61 (English) 1980. CODEN: JACSAT. ISSN: 0002-7863.

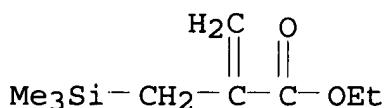
AB Trimethylenemethane (TMM) complexes of transition metals generally are considered to have all three methylene groups equiv. In contrast to such a generalization, use of deuterium labeling indicates that TMM-PdL₂ (L = e.g. Ph₃P) is unsym. in which the three methylene carbons are not equiv. The unsym. complex can be trapped. On the other hand, a pathway exists for equil. by migration of the Pd to give a functional equiv. of a sym. species. With less reactive traps, only the fully equil. species is obsd.

IT 74976-84-4

RL: RCT (Reactant); RACT (Reactant or reagent)
(redn. of)

RN 74976-84-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
(CA INDEX NAME)



CC 29-13 (Organometallic and Organometalloidal Compounds)

IT 74976-84-4

RL: RCT (Reactant); RACT (Reactant or reagent)
(redn. of)

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